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APPENDIX

IN THE
SUPREME COURT OF THE UNITED STATES
TERM OCTOBER 1994

ROBERT C. DOWNER, PETITIONER

VS.

ELDON HANNEMAN AND PATRICIA HANNEMAN, HUSBAND AND WIFE
AND
MAXINE V. SWENSON, RESPONDENTS

APPENDIX E	A-133
APPENDIX F	A-166
APPENDIX G	A-269

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162 pp

United States Department of the Interior
OFFICE OF HEARINGS AND APPEALS
INTERIOR BOARD OF LAND APPEALS
4015 WILSON BOULEVARD
ARLINGTON, VIRGINIA 22203

STODDARD JACOBSEN AND ROBERT C. DOWNER
v.
BUREAU OF LAND MANAGEMENT (ON RECONSIDERATION)

IBLA 86-45 Decided July 8, 1988

Petition for reconsideration of Board decision requiring resurvey.

Petition granted; prior decision, Stoddard *Jacobsen v. Bureau of Land Management*, 97 IBLA (1987), overruled in part.

1. Surveys of Public Lands: Dependent Resurveys

The proper standard for the Bureau of Land Management to apply in the course of a resurvey is to consider a corner existent (or found) if such a conclusion is supported by substantial evidence. "Substantial evidence" is such relevant evidence as a reasonable mind might accept as adequate to support a conclusion.

APPEARANCES: Burton J. Stanley, Esq., Office of the Regional Solicitor, U.S. Dept. of the Interior, Sacramento, CA, for the Bureau of Land Management.

103 IBLA 83

OPINION BY CHIEF ADMINISTRATIVE JUDGE HORTON

The Bureau of Land Management (BLM) has requested reconsideration of the Board's May 8,1987, decision in *Stoddard Jacobsen* v. *Bureau of Land Management*, 97 IBLA 182 (1987). In that opinion, a divided panel held that BLM should be required to undertake another resurvey, either dependent or independent, to ascertain the location of the boundary between sec. 4 and sec. 9, T. 11 N., R. 21 E., Mount Diablo Meridian (MDM), Nevada.

> In its request for reconsideration, BLM states:
>
> [T]he majority purports to set forth a new evidentiary test to be used in conducting resurveys of the public lands which contradict the test previously approved by this Board, the 9th [1] Circuit Court of Appeals, and the

> unanimous position taken by the authoritative treatises in the area. The majority further misapplies or ignores the well established rule that survey monuments, when found, control over distances and calls made in the field notes of the original survey.***

1/ Reference was probably intended to the U.S. Court of Appeals for the Tenth Circuit since the petition subsequently quotes at length from *United States v. Doyle*, 468 F. 2d 633 (10th Cir. 1972).

The majority's new rule holds that a surveyor, when conducting a dependent resurvey of the public lands, may not use evidence of an original corner it its correct position cannot be determined beyond a reasonable doubt. The BLM asserts that this burden of proof cannot be practically utilized in dependently resurveying the public lands since the discrepancies inherent in original surveys, most of which were made in the late 19th or early 20th centuries, contain error which would always create some doubt as to their authenticity. [Emphasis in original.]

(Petition at 1-2).

BLM supports the criticism of the above legal standard as set forth in the dissenting opinion to the Board's previous *Jacobsen* decision, in which it is said:

> To determine that a corner is found does not require evidence "beyond a reasonable doubt," terminology used in the 1973 Survey Manual to help define obliterated or lost corners (see sections 5-9 and 5-20). Instead, an existent corner is defined at section 5-5 as "one whose position can be identified by verifying the evidence of the monument or its accessories, by reference to the description in the field notes, or located by an acceptable supplemental survey record, some physical evidence, or testimony." Consistent with this definition of an existent or known corner, it is said: "If there is some acceptable evidence of the original location of the corner, that position will be employed." (Emphasis added.) Restoration of Lost or Obliterated

Corners and Subdivision of Sections, (1974 ed.) at 10. See also *Clark on Surveying and Boundaries* (3rd ed. 1959) at 365.

97 IBLA at 182, 223 n.2

That the proper test for determining whether a corner is existent is a "substantial" evidence test is urged by petitioner in approximately five pages of excerpts from such treatises as *Clark on Surveying and Boundaries*, 4th ed. 464 (1976); [2] *Surveying: Theory and Practice*, by Davis, Foote, and Kelly, 5th ed. 586, 587 (1966); [3] The Tenth Circuit's opinion in *United States v. Doyle*, supra, and prior Departmental decisions, such as J.M. Beard, 52 L.D. 451 (1928), and Robert J. Wickenden, 73 IBLA 394 (1983).[4]

2/ "A corner is 'existent' if its position can be identified by verifying the evidence of the monument to its accessories by reference to the description in the filed notes, or located by an acceptable supplementary survey record, some physical evidence or testimony." *Id.* at 464.

3/ "The facts are, however, that their original survey did contain errors and probably rather large ones if it was made

during the era of the compass and link chain. Further complications may be added by directions in the description being given by magnetic bearings and the declination at the time of the original survey being unknown, or by no statement having been made as to whether the bearings of the original survey were referred to the magnetic or to the true meridian. Often large mistakes are made in transposing from one record to another or are present in the measurements of the original survey. Loss of corners, lack of reference measurements, removal or alteration of physical boundaries, conflicting testimony of persons having knowledge concerning the position of boundaries, conflicts with adjoining property, and numerous other factors may add to the uncertainities of the problem. "At any point where the surveyor finds what he regards as positive evidence as to the original location of the corner and this location does not agree with the relocation measurements derived from the description of the property, an monument is set at the originial location and new measurements of angles and distances are made to refer to the mark thus established." *Id.* at 586,587.

4/ "Where the reestablishment of a surveyed corner on a second survey is supported by substantial evidence, a protest not accompanied by acceptable conflicting evidence by principally by hearsay, does not warrant further survey or investigation of the corner." *Id.* at 397 (emphasis in original).

In contrast to the above, it is the case that the only pronouncement connecting the "beyond a reasonable doubt" standard to the degree of evidenceneed to conclude a corner found is the Board's prior decision at issue.

[1] The Board has carefully re-evaluated its

prior opinion and concludes that a new evidentiary standard was improperly set forth therein for determining whether a corner is existent. The petition for reconsideration is therefore granted. [5]

The weight of authority is convincing that the proper standard for BLM to apply in the course of a resurvey is to consider a corner existent (or found) if such a conclusion is supported by substantial evidence. [6] *Robert J. Wickenden*, supra. See also Survey Manual at 5-5; *Clark on Surveying and Boundaries*, 4th ed. supra; *Surveying: Theory and Practice*, by Davis, Foot, and Kelly, supra; *United States v. Doyle*, supra. We so hold the Board's prior decision is overrruled to the extent it is inconsistent here with.[7]

5/ Petitioner has sought reconsideration by the Board en banc. In responding to such requests, the Board follows a procedure similar to that set forth at Rule 35(b) of the Federal Rules of Appellate Procedure. Thus en banc consideration is not required where, as here, after full circulation of the petition and dispositive order or decision prepared by the assigned panel, no member of the Board request a vote on whether the matter

should be considered en banc.

6/ "Substantial evidence" is defined by the courts as "more than a scintilla but less than a preponderance" and is such relevant evidence as a reasonable mind might accept as adequate to support a conclusion." *Coleman v. Gardner*, 264 F. Supp. 714, 717 (D.W. Va. 1967).

7/ The dissenting opinion appears to argue that the "substantial evidence" test is unprecedented. As BLM well knows, and hence its petition for reconsideration in this case, the standard enunciated here comports with the agency's own interpretation of the Survey Manual, which it wrote, and the actual manner in which it has consistently applied the provisions of the manual throughout the years in thousands of survey decisions. The entire thrust of the Survey Manual is to recognize corners a existent, rather than lost, if at all possible. The Board's prior decision, requiring proof beyond a reasonable doubt that a corner is existent, understandably caused a stir among survey professionals and BLM management. (It is noted the petition in this case is endorsed by the Director, BLM, and the Acting Assistant Secretary - Land and Minerals Management; Exh. 1, Petition for Reconsideration).

Utilization by BLM of a substantial evidence test for establishing that a corner is existent is not to be confused with the standard of review applied by the Board in adjudicating appeals from survey decisions. The Board has held that a party challenging the correctness of a dependent resurvey must show error by a "preponderance of the evidence." Peter Paul Groth, 99 IBLA 104 (1987). Thus, in an appeal from a survey decision, an appellant may be able to show that its placement of a disputed corner location is supported by substantial evidence. However, as long as BLM's placement of the corner location is also supported by substantial evidence, appellant's showing is to no avail. To prove error in the BLM decision, appellant must demonstrate by a preponderance of the evidence that BLM's placement of the corner is

wrong. Similarly, where BLM has concluded in a dependent resurvey that a corner is lost, appellant may not be heard to say that it can show by substantial evidence that the corner is found. It must establish error in the BLM decision by a preponderance of the evidence.

It is therefore incumbent on the Board to reevaluate the evidence of record in this case as to specific disputed corners employing the proper evidentiary standard. So doing, and for the reasons previously espoused in the dissenting opinion to our prior decisions, the following findings and conclusions are rendered.

SW Corner of Sec. 4

The 1881 filed notes denote corner monumentation for the SW corner of sec. 4 to be by a "trachyte stone 24 x 18 x 12." BLM's 1982 resurvey relies on a trachyte stone measuring 22 by 17 by 9. This same stone was found by the Nevada State Highway Department in 1939. Four bearing trees were found nearby, supporting a conclusion that the foregoing stone represents the original corner monument.[8] The

Board holds BLM's decision as to the location of the SW corner of sec. 4 1/4 Corner Common to Secs. 4 and 9 is supported by substantial evidence.

8/ Jacobsen and Downer argue that all of the bearing trees were moved in 1881, having been dragged to where found from someplace else. Absolutely no evidence was presented in support of this theory. On the other hand, it was established that part of the stump or root system of one of the bearing trees was found still stuck in the ground when the 1982 resurvey was performed. In addition, the University of Arizona Laboratory of Tree-Ring Research was able to conclude that two of the bearing trees were living specimens well into the 20th century and that the blazes on two trees were made in 1881.

1/4 Corner Common to Secs. 4 and 5

Both BLM and Jacobsen and Downer claim to have located the original corner monument for the quarter corner common to secs. 4 and 5. BLM's monument is smaller than the monument described in the original survey and is of a different composition. Nonetheless, Eugene Faust, a cartographer for the State of Nevada, testified that having examined section corners of various kinds for over 35 years, he would clearly accept

BLM's monument as the original corner monumentation, based on markings on the stone and other considerations. Moreover, BLM's monument stands in proper relation to the section corners one-half mile to the south and north. [9] BLM's decision as to the location of the quarter corner common to secs. 4 and 5 is supported by substantial evidence.

9/ It is no longer disputed that the northwest corner of sec. 4 is a found corner as corroborated in BLM's 1982 resurvey. Even under the erroneous "beyond a reasonable doubt" standard, the Board's prior decision concluded the northwest corner of sec. 4 "has been found, regardless of any discrepancies in record calls to know corners." 97 IBLA at 210.

1/4 Corner Common to Secs. 4 and 9

BLM submits that the quarter corner common to secs. 4 and 9 is not locatable by an original corner monument. According to BLM, it is not a lost corner, but an obliterated one whose location has been correctly perpetuated.

The controversy over this corner was discussed by the dissenting opinion in our prior decision.

Therein, it was advocated that the Board should adopt BLM's recommendation that it be allowed to reestablish the corner of secs. 3, 4, 9, and 10 by double proportionate measurement. This procedure would serve to 10 No original corner monument was found by BLM for this section corner during its resurvey. During the hearing below, the BLM official in charge of the resurvey testified that a remonumented corner was reduce the 5-degree deflection in the south line of sec. 4 occurring between the quarter corner and the southeast corner, the principal criticism advanced by Jacobsen and Downer to BLM's placement of the quarter corner common to secs. 4 and 9.

We hereby approve the procedure previously proposed by BLM. Pursuant to the Board's de novo review authority, BLM is directed to re-establish the southeast corner of sec. 4 by double proportionate measurement so as to reduce the deflecting in the south line of sec. 4.

Therefore, pursuant to the authority delegated to the Board of Land Appeals by the Secretary of the Interior, 43 CFR 4.1, the Board's decision reported at 97 IBLA 182 (1987) is overruled in part [10] and BLM's 1982 dependent resurvey is upheld on appeal, conditioned on the reestablishment of the southeast corner of sec. 4.

Wm. Philip Horton
Chief Administrative Judge

I concur:

Gail M. Frazier
Administrative Judge

10/ No original corner monument was found by BLM for this section corner during its resurvey. During the hearing below, the BLM official in charge of the resurvey testified that a remonumented corner was reluctantly accepted: We did not find the corner of 3, 4, 9, and 10. We accepted evidence that was used by other people. We felt that that was not the corner, but we couldn't prove it, so we accepted that**** (Testimony of Neil R. Forsyth at 276).

11/ The prior decision is not overrruled to the extent it

accepted the northwest corner of sec. 4 to be a found corne
See note 9. However, the proper legal basis for such
holding, consistent with this opinion, is that there wa
substantial evidence supporting the conclusion, viz., "a scribe
rock and bearing trees whose blaze marks were age-dated ar
found to have been made at the time of the 1881 origina
survey" (Tr. 366).

ADMINISTRATIVE JUDGE MULLEN DISSENTING:

In footnote 2 of their opinion, the majority states that a corner is "existent" if its position can be identified by verifying the evidence of the monument or its accessories by reference to the description in the field notes, or located by acceptable supplementary survey record, some physical evidence or testimony.

The majority has also pronounced the standard of proof for determining that a corner is existent. It is existent "if such a conclusion is supported by substantial evidence." Under the standard set out in the majority opinion, which will be the standard of proof in all future cases, a corner will be deemed to be existent if there is substantial evidence of the existence of a monument or its accessories by reference to the description in the field notes, or located by acceptable supplementary survey record, some physical evidence or testimony to support that determination. As will be seen,

the standard of proof for the determination that a corner is existent will control in all future cases, regardless of the issue.

The majority opinion is defendable when the standard of proof for an existent corner set out in the majority opinion is applied.

If the only question was whether the corner was existent there would be no problem with the majority opinion. However, it is not that simple. I fear that by winning this case, the Cadastral Survey has set the stage for a number of losses in future contests. A large hiatus now exists between the test for determining if a corner is lost and determining if a corner is existent. For those cases, the previously well-defined single standard no longer exists.

Prior to this decision the burden was on the one claiming that a monument represents the location of the corner. In Elmer A. Swan, 77 IBLA 99 (1983), this Board found sufficient evidence of the existence

of a monument which represented, according to the appellant, the location of the corner in question to require a hearing before an Administrative Law Judge. However, the burden of showing by a preponderance of the evidence that the monument represented the correct position of the corner rested with the appellant. [1] If the standard pronounced in the majority opinion had then been in place, our holding in that case might well have been different. Similarly, there may have been a different result in Bethel C. Vernon, 37 IBLA 226 (1978), and Alfred Steinhauer, 1 IBLA 167 (1970).

The test adopted by the majority in this case should be analyzed in light of the evidence previously needed to support a finding that a

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1/ The "weight" of the burden previously imposed on a contestant is discussed below.

corner is "lost." In many cases, such as Crow Indian Agency, 78 IBLA 7 (1983), the contestant challenges a BLM determination that a corner is "lost." Under the standard adopted by the majority, the results would have been different.There was substantial evidence of an existent corner. The appellant had produced a monument matching the monument described in the field notes for the original survey. The Cadastral Survey postulated but presented no physical evidence that the monument had been moved. Applying the test for a lost corner, this Board upheld the Cadastral Survey determination that the corner was lost. There was sufficient evidence to raise a reasonable doubt as to the location of the corner. The evidence insupport of the location of the corner at the monument was at least as strong as the evidence presented by the Cadastral Survey in this case, and the Agency arguments were very similar to that now advanced by the Cadastral Survey.

There is a logical basis for continuing to apply the standard set out in *Stoddard Jacobsen & Robert C. Downer* v. *Bureau of Land Management*, 97 IBLA 182 (1987). That basis is found in the Manual of Instructions for the Survey of the Public Lands of the United States, Technical Bulletin No. 6, BLM, 1983 (Survey Manual). As will be seen, the pronouncement in the *Jacobsen & Downer* case was the standard previously applied, and the pronouncement by the majority in this case is new.

When the Survey Manual was written, the authors were careful to accurately define and apply the terms used in that text. A "corner," as that term is used in the Survey Manual, is not a pile of stones or other physical monument. It is a point on the earth's surface which has been identifiedby its relationship to other points on the earth's surface and described by giving distances and bearings from the other points. The authors gave a specific warning that "this terms 'corner' and

'monument' are not interchangeable. A 'corner' is a point determined by the surveying process. A 'monument' is the object of physical structure which marks the corner point." Survey Manual at 5-4.

After establishing the exact location of corners, a surveyor will erect a marker of "monument" at the location of each corner. The monuments are merely a physical record of the surveyor's work. In a resurvey, the surveyor goes into the field and reconstructs the survey previously conducted, reestablishing the locations of the corners established by the original survey. The existence of monuments is clearly an aid in this determination, but should not be the controlling factor.

The portion of the Survey Manual pertinent to this case was written to give guidance and directives to a surveyor performing a "reconstructive" survey. The surveyor must first determine whether the corner previously established can be identified as "existent" by comparing the written record complied

during the course of the initial survey and the physical evidence he finds on the ground. Under the standard applied prior to the holding in this case, the surveyor was able to make a "yes" or "no" decision. The locatin of the corner, as described in the field notes of the original survey or the plat of that survey, was deemed to be "existent" as a result of finding evidence of the monuments erected at the location of the corner and ties to other physical feartures described in the notes and plat. On the other hand, if the location of the corner could not be adequately established by comparison of the information found on the ground to the field notes and plat, it was deemed to be "lost."

The manual gives specific instructions as to how a corner can be determined to be "existent":

> An existent corner is one whose position can be identified by verifying evidence of the monument or its accessories, by reference to the description in the field notes, or located by an accepable supplemental survey record, some physical

evidence or testimony.

> Even though its physical evidence may have disappeared, a corner will not be regarded as lost if its position can be recovered through the testimony of one or more witnesses who have a dependable knowledge of the original location.

Survey Manual at 5-5.

Under the same heading - "Identification of Existent Corners" - the Survey Manual gives further guidance as to what can be deemed to be an "existent" corner:

> An obliterated corner is one at whose point there are no remaining traces of the monument or its accessories, but whose location has been has been perpetuated, or the point for which may be recovered beyond a reasonable doubt by the acts and testimony of the interested landowners, competent surveyors, other qualified local authorities or witness, or by some acceptable record evidence.
>
> A position that depends upon the use of collateral evidence can be accepted only

> as duly supported, generally through proper relation to known corners, and agreement with the field notes regarding distances to nautral objects, stream crossings, line trees, and off-line trees blazes, etc., or unquestionable testimony.

Survey Manual at 5-9.

The Survey Manual requirements for an "existent" corner are specific. The definition of an existent corner and the definition of an obliterated corner are clearly related. The last paragraph of the definition of an "existent" corner and the defintion of an "obliterated" corner are a statement of the information that can be used when determining that an "obliterated" corner is "existent." [2]

The section of the Survey Manual immediately following the section entitled "Identification of Existent Corners" is entitled "The Restoration of Lost Corners." The definition of a "lost" corner, found in this section, contains precise

language setting out the standard for determining that a corner is "lost."

> A lost corner is a point of a survey whose position cannot be determined, beyond a reasonable doubt, either from traces of the original marks or from acceptable evidence or testimony that bears upon the original position and whose location can be restored only by reference to one or more interdependent corners. [Emphasis added.]

2/ For older surveys, the corner is rarely found to be existent based only on the findings in the field. The corner monument and ancillary monuments are often totally obliterated or partially obliterated. While the relationship between the Survey Manual description of an "existent" and an "obliterated" corner is apparent from the rest of the Survey Manual section on existent corners, the standard of proof for an obliterated corner is no longer related to that for an existent corner. By definition, an obliterated corner must be recovered beyond a reasonable doubt. This raises an interesting question regarding the standard of proof for a partially obliterated corner.

Survey Manual at 5-20.

If the standard adopted by the majority had not been adopted, the inter-relationship between the two definitions could have been easily stated.[3]

If a "lost" corner is one whose position cannot be determined beyond a reasonable doubt, an "existent" corner is one whose position has been established beyond a reasonable doubt. This is no longer the case. The proof necessary for a determination that a corner is "lost" and the proof necessary for a determination that a corner is "existent" are no longer related. Previously, if ther was a reasonable doubt regarding the location of a corner, it was "lost." For an "existent" corner, there can now be a reasonable doubt. The present test only requires that such conclusion be supported by substantial evidence that the monument or accessory is the same as that described in the field notes.[4] There can and will be cases where there is both substantial doubt that the monument or accessories are at the corner. There lies the hiatus.

The writers of the Survey Manual could have easily stated that, for a lost corner, there is no

substantial evidence that the monument or accessory is the same as that described in the field notes. [3] There can and will be cases where there is both substantial doubt that the monument or accessories are at the corner. There lies the hiatus.

3/ I say that there are two. Actually, there are now three. The inconsistency between the standard used by the majority when defining an existent corner cannot be used for an obliterated corner. No explanation is given for overturning the prior determinatin that the southwest corner of sec. 4 was obliterated. In order to reduce the 5-degree deflection, we must assume that this corner is "lost."

The writers of the Survey Manual could have easily stated that, for a lost corner, there is no substantial evidence that the monument or accessory is the same as that described in the original field notes. There was a sound and logical reason for the authors' choice of words. The basis for the standard of proof for a lost corner was in the authors' minds when they gave the admonition that the term "corner" and "monument" are not interchangeable, and is indicated throughout the Survey Manual.

4/ In footnote 7 to its opinion, the majority has stated that "[t]he entire thrust of the Survey Manual is to recognize corners as existent, rather than lost, if at all possible" and has further stated that this position is endorsed by the Director, BLM and the Acting Assistant Secretary - Land and Minerals Management.

I cannot disagree with that statement. My concern in this case is not directed to this concept. In order to reach their conclusion, the majority have treated a corner and a monument as being synonymous. There is no question that a monument exists in this case. A question still remains as to whether the monument is at the corner. Thus, there is still a reasonable doubt that the corner and the monument are at the same point.

A monument is a physical object which can be intentionally or accidentally moved or obliterated during the time between the original survey and the resurvey. By stating the "uncertainty" necessary for finding a corner to be lost, the authors of the Survey Manual gave the Cadastral surveyor sufficient latitude to reject a monument when there is a reasonable doubt that a monument is at a corner. Under the test now adopted by the majority, a surveyor will be required to defend his determination that a corner is lost by overcoming substantial evidence that the monument or accessory is that same as that described in the field notes. A showing that there is a reasonable doubt that the monument represents the corner is not longer sufficient to overcome physical evidence of a monument.

It may be that the Cadastral Survey and the majority have equated the term "beyond a reasonable doubt" to the degree of certainty necessary for a conviction in a criminal trial. This is not the case. The standard applied in a civil matter such as this is lower than for a criminal proceeding. See generally 30 Am. Jur. 2d § 1168 (1967) and citations therein. The burden of proof required to overcome a reasonable doubt that a monument represents the location of a corner has also been stated by

this Board in previous survey cases. In *Elmer A. Swan*, supra, we stated that the proponent of an existent corner must show that the corner is not lost by presenting clear and convincing evidence.

A surveyor no longer has the latitude he once had. He can no longer reject a monument that matches the one described in the field notes when he has a reasonable doubt that it represents the corner. If there is substantial evidence of the existence of a monument or accessory the corner will be considered "existent." The sword cuts both ways. A surveyor can no longer show, for example, that the calls in the field notes do not sufficiently match the location of the monument or accessory within a reasonable tolerance, thus creating a reasonable doubt that the corner is at the monument. [5] If a contestant

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5/ The factual basis for the majority holding should be carefully examined, with special attention being given to a comparison of the evidence set forth in the majority opinion (including footnote 8, to the evidence set out in *Stoddard* Jacobsen & Robert C. Downer v. *Bureau of Land Management*, supra at 211-17. This comparison will demonstrate that the discrepancies between the calls and descriptions in the field notes and the evidence found in the field will have no bearing on a determination that the corner is existent unless the party claiming that the corner is "lost" can present evidence to support a theory that the corner has been moved. It matters not that the bearing trees were smaller

shows by a preponderance of the evidence that the corner is "existent," using the standard for such determination set out in the majority opinion, he has overcome the determination that it is lost. A corner cannot be both "existent" and "lost."

The Cadastral Survey argued that a standard of proof set out in *Stoddard Jacobsen & Robert C. Downer* v. *Bureau of Land Management*, supra, was a "new rule." It clearly is not. The "beyond reasonable doubt" language can be found in the definition of a "lost" corner in the Circular on Restoration of Lost or Obliterated Corners and Subdivision of Sections issued by the General Land Office on October 16, 1896. See A History of the Rectangular Survey System (BLM), at 684.

As noted above, the Administrative Law Judge's findings and the prior decision by the Board in this case were consistent with previous decisions. Under the standard applied in prior cases, the Board

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(cont.) than the size stated in the field notes, or that the bearings and distances from the monument to the bearing trees did not correlate with the field notes in any respect, or that the monument was not the right size, the right composition, or marked in the manner described in the field notes. The comparison will clearly demonstrate that evidence indicating that the original survey was "sloppy" or "rushed" is sufficient to overcome gross variances between the evidence found in the filed notes.

held that a party challenging a Cadastral Survey determination that a corner is lost must submit clear and convincing evidence that the corner is existent. [6] They now need only present substantial evidence that the monument or accessory matches the description in the original field notes.

The Cadastral Survey freely admits that numerous discrepancies existed between the ties and physical descriptions in the field notes for the initial survey and the physical evidence found in the course of the resurvey. A review of *Stoddard* Jacobsen & Robert C. Downer v. Bureau of Land Management, supra, should leave no doubt that the facts supported the Administrative Law Judge's findings of fact. Based upon the testimony and evidence presented at the hearing, the Administrative Law Judge determined that the survey was incorrect for certain of the corners because the discrepancies between the physical evidence and the description in the original survey left a reasonable doubt

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6/ In his decision, the Administrative Law Judge found that the Jacobsen-Downer portrayal of the location of the corners more closely approximated the descriptions in the original survey notes, but that there was also a reasonable doubt that the monuments found by them were at the corners. Applying the majority standard, Jacobsen and Downer would have prevailed if the Cadastral surveyor had determined the corner to have been lost.

regarding the location of those corners. Said another way, he was convinced by testimony, the documents admitted into evidence, and his field examination that the corners were "lost," as that term is defined in the Survey Manual. 7/

The Administrative Law Judge's decision was well reasoned and supported by the evidence. It still is. However, the determination now made by the majority can also be supported. There was substantial evidence of the existence of monuments and accessories matching those described in the original field notes, even though there was clearly room for a reasonable doubt that the monuments were at the corners.

At this point, it should be noted that when Jacobsen and Downer challenged the location of the

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7/ Henceforth, an appellant must show by a preponderance of the evidence that a corner is "existent," using the standard of proof set out in the majority opinion. It does not mean that an appellant will have a greater burden than that imposed on the Cadastral Survey in this case, when disputing a Cadastral Survey determination that the corner was "lost." A corner will be deemed to be "existent" based upon substantial evidence of the existence of a monument and/or accessories, even though the ties to the monument and the accessories are sufficiently dissimilar to raise a reasonable doubt that the monument is at the corner.

SW corner of section 4, they claimed that it was "lost." The majority has found the corner to be "existent" because there was substantial evidence of the existence of a monument and bearing trees. As a result, a showing that there is a reasonable doubt, based upon a comparison of the findings in the field to the description of the corner in field notes, will no longer be sufficient to support a determination that the corner is lost. The surveyor must overcome substantial evidence that the monument or accessories match the description in the field notes.

The primary impact of the majority decision is that, in future cases, the standard of proof for an "existent" corner and the standard of proof for a "lost" corner are no longer consistent and if an Administrative Law Judge or this Board must choose between the two, the standard of proof for an existent corner set out in the majority opinion will control. I am sure that this Board will soon see the Cadastral Survey arguing that the standard of proof for an existent corner so strongly urged upon this Board should not be applied because it had determined the corner to be lost.

R. W. Mullen
Administrative Judge

United States Department of the Interior

OFFICE OF HEARINGS AND APPEALS

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STODDARD JACOBSEN AND ROBERT C. DOWNER

v.

BUREAU OF LAND MANAGEMENT

IBLA 86-45 Decided: May 8, 1987

Appeals from a decision of Administrative Law Judge L. K. Luoma, ordering resurvey of public land: Group No. 599.

Affirmed.

1. Surveys of Public Lands: Dependent Resurveys

A corner will be regarded as lost where the evidence fails to establish beyond a reasonable doubt that monuments or accessories are those set in the original survey, or that the corner has been perpetuated, or that collateral evidence with respect to courses and distances to known corners or intervening topographical and geographical items on line described in the field notes of the original position of the corner.

APPEARANCES: Stoddard Jacobsen and Robert C. Downer, *pro sese*; Burton J. Stanley, Esq., Office of the Regional Solicitor, U.S. Department of the Interior, Sacramento, California, for the Bureau of Land Management.

OPINION BY ADMINISTRATIVE JUDGE MULLEN

This case concerns the actual location of the boundary between sec. 4 and sec. 9, T. 11, R. 21 E., Mount Diablo Meridian (MDM), Nevada. That line had originally been surveyed in 1881, by T. K. Stewart and G. W. Conkling, deputy surveyors. Substantial disagreement subsequently developed resurveyed by the Cadastral Survey, Bureau of Land Management (BLM), between April 19, 1982, and January 5, 1983. This dependent resurvey encompassed the subdivisional lines between secs. 3 and 4, 4 and 5, 4 and 9, and 9 and 10 of the same township, as a retracement and reestablishment of the lines of the original survey in their true, original corners. Stoddard Jacobsen and Robert C. Downer protested the dependent resurvey, and in a July 5, 1984 decision, the State Director, Nevada, BLM, dismissed the protest. [1] Jacobsen

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1/ The location of the south line of sec. 4, which is also the north line of sec. 9, is of considerable concern to Jacobsen, who is the owner of 160 acres originally patented to William Carter, as a homestead on June 1, 1882, and described as the W 1/2 NE 1/4, E 1/2 NW 1/4 sec. 9, T. 11 N., R. 21 E., MDM, Nevada.

and Downer then appealed to the Board. For convenience, Jacobsen and Downer are referred to as "appellants."

In *Stoddard Jacobsen*, 85 IBLA 335, 342 (1985), we concluded that appellants had raised a "substantial question of fact" whether the dependent resurvey was an accurate retracement and reestablishment of the south line of sec. 4, and deemed a hearing by an Administrative Law Judge to be appropriate. Accordingly, we set aside the July, 1984 BLM decision and referred the case to the Hearings Division, Office of Hearings and Appeals, for a hearing and decision. We stated that appellants would have the burden of proving by a preponderance of the evidence that, as to the location of the south line of sec. 4, the dependent resurvey does not conform to the original survey, and that, upon an adequate showing, the Judge "should remand the case to BLM so that the [line] can be resurveyed." *Id.*

The case was subsequently assigned to Administrative Law Judge L. K. Luoma, who conducted a hearing on June 19-21, 1985, in Reno, Nevada, and on June 25, 1985, in Minden, Nevada. In his September 27, 1985, decision, after summarizing the extensive

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(cont.) The land had originally been surveyed by Downer in 1965.

testimony and exhibits, Judge Luoma concluded that, because "there appear to be so many deviations from the original call and distances in BLM's re-survey as to cast doubt on its accuracy ***, I see no alternative but to remand the case to the BLM for a resurvey." Judge Luoma also concluded that the evidence did not fully support the accuracy of appellants' retracement and reestablishment of the south line of sec. 4.

On October 21, 1985, Jacobsen and Downer filed a notice of appeal from Judge Luoma's September, 1985 decision, and a statement of reasons for their appeal. Essentially, they contend that Judge Luoma should have accepted the accuracy of their placement of the south line of sec. 4. Jacobsen and Downer state that they agree with the decision to remand the case to BLM for a resurvey, but that the resurvey should "confirm reasonably with the calls and distances recorded in the original notes and plat" and cover secs. 4, 5, 8 and 9, T. 11 N., r. 21 E., MDM, Nevada.

On November 4, 1985, the Office of the Regional Solicitor, on behalf of BLM, also filed a notice of appeal from Judge Luoma failed to provide any guidance to BLM on how to conduct another resurvey and that, in such circumstances, it would simply stand by its

original dependent resurvey, which it believed to b supported by a preponderance of the evidence adduce at the hearing. BLM asserts that the accuracy o the original resurvey was demonstrated by actual discovery of the various corners "on the ground, which should be given greater weight than the call and distances in the field notes for the 1881 survey

In the alternative, BLM contends that it shoul be allowed to reestablish the southeast corner o sec. 4, which was not disputed by the parties at th time of the hearing, by the method of doubl proportionate measurement, in order to reduce the 5- degree deflection in the south line of sec. 4, show in the resurvey. This deflection had been considere significant by Judge Luoma, as there was no deflectio in either the field notes or plat of the 1881 survey. In any case, BLM argues that Judge Luoma had erre because the dependent resurvey correctly reestablishe the four corners of sec. 4 challenged by appellants, which corners were used by appellants to establish the accuracy of their placement of the south line of sec. 4, *i.e.*, the south quarter corner, southwest corner, west quarter corner, and northwest corner. BLM also argued that "in most critical points," its dependent resurvey

"comes substantially closer to agreement with the original survey notes than do either of appellant's surveys". [2]

On December 16, and January 21 and 27, 1986, appellants filed three reply briefs to BLM's statement of reasons (hereinafter referred to, respectively, as RB-A, RB-B and RB-C). Appellants contend their placement of the south line of sec. 4 conforms more closely with the record calls, distance and descriptions in the field notes of the 1881 survey than the BLM dependent resurvey, and generally dispute the accuracy of the resurvey. For the most part, the arguments advanced are merely reiterations of those made by appellants during the course of these proceedings.

Appellants also restate the theory regarding the discrepancy between their survey of the south line of sec. 4 and other surrounding section lines, and BLM's resurvey, which will hereafter be referred to as the "double corners" theory. Essentially, appellants' theory is that BLM's resurvey relied on duplicate quarter and section corners found on the

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2/ BLM apparently refers to two surveys (RLS 446 and RLS 2350) prepared by Downer. Two survey maps reflecting the first survey were recorded in Douglas County, Nevada, on May 7, 1965, and Nov. 25, 1966. These were supplemented by a March 23, 1983 map. The second survey was completed on March 22, 1982.

ground which were placed "shortly after completio
of the 1881 survey and submittal of the notes an
plat***[in order to] show a closure on the [northwest
township corner within required tolerance" [3] (RB-
at 1). Appellants contend that in order to achiev
closure, the original corners were partially o
completely obliterated and duplicate corners created
"(A)n effort was made to make the new corners appea
genuine, by moving marked stones, or marking ne
bearing trees." *Id.* Appellants argue that these
"moved" corners do not match the record calls an
distance in the field notes of the 1881 survey,
while the original corners do. Appellants assert
that they have documented nine "moved corners,"
including the four corners disputed herein, which
they claims to have been moved to the southeast by
"similar distances." *Id.* at 7. Appellants theorize
why the nine corners were chosen:

> Apparently, after moving the N.W. cor. Sec. 5, to fit the tolerance to the township corner, the 1881 surveyor felt that he had better move some of the nearby corners to the east and south to insure that the fraud would escape detection. He ended up by moving all of the corners in Sections 4 and 5, except the east line of Sec. 4

3/ Appellants note the surveyors were required by survey instructions to resurvey the township in the event closure could not be achieved, and postulate that they may instead have opted to move the corners. See *State of Oregon*, 78 IBLA 13, 19-20 (1983).

> Beyond these corners, the country became steep and rough and heavilywooded, and inspection was unlikely.

Id. at 8. Accordingly, appellants now contend that the Board should order a dependent resurvey of secs. 4 through 9, T. 11 N., R. 21 E., MDM, Nevada.

On February 12, 1986, BLM filed a motion to strike the two reply briefs received by the Board on January 21 and 27, 1986, because they were not filed within 30 days after service of BLM's statement of reasons on November 20, 1985, as required by 43 CFR 4.414. Even construing the reply briefs submitted by appellants as "answer[s]" to BLM's statement of reasons within the meaning of 43 CFR 4.414, we are not required to strike them. The cited regulation provides that an untimely answer "may be disregarded in deciding the appeal." 43 CFR 4.414. However, we have adopted a fairly permissive approach to consideration of late-filed documents (other than notices of appeal) setting forth the reasons for appeal or responding thereto, in the interest of fairness to the parties and where no prejudice to the parties or the public interest can be demonstrated

See *James C. Mackey*, 96 IBLA 367 (1987). Here, the reply briefs were obviously served to the Regional Solicitor, who has had ample time to respond. Moreover, we can discern no harm to the public interest by virtue of these late filings. Rather, it is appellants who have run the risk that the briefs would not be considered by the Board because they might be received after issuance of a decision. Having received them prior to that time and in the absence of any demonstrated prejudice, we will accept the reply briefs. BLM's motion to strike is denied.

In their notice of appeal, appellants stated an intention to present "one item of significant new evidence." Appellants have made no proffer of that evidence, or indicated how it would significantly affect the outcome of this appeal. We will, therefore, adjudicate the case without that evidence.

[1] We turn, therefore, to the substantive matters on appeal. As we stated in *Stoddard Jacobsen*, supra, at 336, a "dependent resurvey is a retracement and reestablishment of the lines of the original survey in their true, original positions, according to the best available evidence of the positions of the original corners." Original survey lines are to be reestablished under a dependent resurvey by

recovering or restoring the original corners by any of three methods, in descending order of importance. See generally Manual of Instructions for the Survey of the Public Lands of the United States, Technical Bulletin No. 6, BLM, 1973 (Survey Manual) at 5-1 through 5-46. First, corners can be recovered by finding evidence of monuments or accessories which "agree with the record in the field notes of the original survey subject to natural changes" (Survey Manual at 5-6). In the case of "material disagreements between the particular evidence in question and the record calls," which cannot be accounted for by natural changes, the Survey Manual sets forth guidelines to follow in determining which features to eliminate as doubtful:

(1) The character and dimensions of the monument in evidence should not be widely different from the record.

(2) The markings in evidence should not be inconsistent with the record.

(3) The nature of the accessories in evidence, including size, position and markings, should not be greatly at variance with the record.

Allowance for ordinary discrepancies should be made in considering the evidence of a monument and its accessories. No set rules can be laid down as to what is sufficient evidence. Much must be

left to the skill, fidelity and good judgment of the surveyor, bearing in mind the relation of one monument to another and the relation of all to the recorded natural objects and items of topography.
Survey Manual at 5-7.

Corners which cannot be recovered by evidence of monuments or accessories are regarded as obliterated to the extent that they may still be recovered on the basis that their location has been "perpetuated" or that collateral evidence established their location. *Id.* at 5-9. Such collateral evidence is generally considered to be "proper relation to known corners, and agreement line trees, and off-line tree blazes, etc., or unquestionable testimony." *Id.* Where a corner cannot be considered existent or obliterated, it will be regarded as a lost corner, and restored by the method of proportionate measurement, *i.e.*, reference to two or more interdependent corners, in harmony with the record of the original survey. The Survey Manual also established that the standard to be applied in determining whether a corner can be said to have been found is proof beyond a reasonable doubt. By definition, a "lost corner is a point of a survey whose position cannot be determined, beyond a

reasonable doubt, either from traces of the original marks or from acceptable evidence or testimony that bears upon the original position." Id. at 5-20; see *Stanley A. Phillips*, 31 IBLA 342, 347 (1977). It is not necessary to show beyond a reasonable doubt that a corner is lost. It need only be established that there is a reasonable doubt as to its position.

In conducting a dependent resurvey, all relevant evidence must be considered. *Bethel C. Vernon*, 37 IBLA 226 (1978); *Orion L. Fenton*, 1 IBLA 203 (1971). A dependent resurvey also must comply with the directions set forth in the Survey Manual. *Domenico A. Tussio*, 37 IBLA 132 (1978). An independent resurvey, which would establish new section lines without regard to the original survey, may be resorted to "if there are intolerable discrepancies in the original survey" (Survey Manual at 149). We will generally apply there rules in our examination of the testimony and evidence presented at the hearing to determine if Judge Luoma's decision is supported by the evidence. In an appeal from a decision of an Administrative Law Judge, the appealing party has the burden of showing error by a preponderance of the evidence. See *United States* v. *Connor*, 72 OBLA 254 (1983). It must be kept in mind that with respect to this burden of proof, BLM is an appellant.

Prior to commencing a discussion of the disputed corners, we deem it advisable to generally describe the resurvey in question. The starting point of the resurvey was the corner common to secs. 9, 10, 15 and 16 (SE cor., sec. 9). This corner was accepted by all parties as having been a "found" corner. The survey then proceeded on a course N. 0 degrees 28' E. on the boundary between secs. 9 and 10. The 1/4 corner common to secs. 9 and 10. At the NE corner, sec. 9, no evidence of the original corner was found, but a monument was found which all parties accepted as being "a careful and faithful perpetuation of the original corner" (Govt. Exh. 35, Survey notes of 1982 survey, at 3).

The survey continued on a N. 0 degrees 09' W. bearing on the boundary between secs. 3 and 4. The 1/4 corner common to secs. 3 and 4 was set by proportionate measurement at 38.94 chains, as there was no remaining evidence of the original corner. The survey continued on the same bearing for a distance of 38.82 chains and tied to the corner common to secs 3 and 4, T. 11 N., R. 21 E., and secs. 33 and 34, T. 12 N., R. 21 E.

The survey then commenced at the NE corner, sec. 9, and proceeded on a course S. 84 degrees 48' W. between secs. 4 and 9, a distance of 37.22 chains

to the 1/4 corner common to those two sections. The location of this 1/4 corner was disputed at the time of the hearing. From the 1/4 corner common to secs. 4 and 9, the survey ran at a bearing of S. 89 degree 30' W., a distance of 39.70 chains, to the corner common to secs. 4, 5, 8 and 9 (SW cor., sec. 4). This corner was also disputed at the time of the hearing.

From the SW corner, sec. 4, the survey ran N. 0 degrees 39'W. between secs. 4 and 5, for a distance of 39.88 chains to the 1/4 corner common to secs. 4 and 5. This corner was also disputed at the time of the hearing. The survey then continued on a bearing of N. 0 degrees 43' E., a distance of 40.35 chains, to close at the corner common to secs. 4 and 5, T. 11 N., R. 21 E., and secs. 32 and 33, T. 12 N., R. 21 E., which had been remonumented during the course of a survey conducted in 1972.

No attempts were made to tie to any additional corners.

As noted above, this case concerns the location of the south line of sec. 4, and particularly the location of four disputed corners which were used when locating the south line. [4] For the sake of

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4/ The four "disputed" corners to which we refer are the south 1/4, southwest, west 1.4, and northwest corners of sec. 4.

clarity, we will discuss each of those corners and the related line calls separately.

Quarter Corner Common to Secs. 4 and 9
T. 11 N., R. 21 E., MDM

Corner as described by BLM

This corner is described in the field notes of the 1881 survey (Govt. Exh. 3) as a 4-inch-diameter post set in an earth mound with a 10-inch-diameter pine located 70 links distant, bearing N. 80 degrees W. In conducting its dependent resurvey, BLM did not find this 1/4 corner, but relied on the location of the corner given in a survey (RLS 3740) performed by Jimmy D. Jones and recorded in Douglas County, Nevada, on January 14, 1982 (Govt. Exh. 15). That survey based the location of the corner on a tie to the corner in right-of-way maps of the Nevada

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(cont.) Although on appeal, BLM "offers" to reestablish the southeast corner of sec. 4 in order to minimize the 5-degree deflection in the south line, throughout the proceedings below, the location of this corner was accepted by BLM, appellants, and the witnesses who testified in their behalf. The accuracy of this corner will be discussed, infra. We are mindful of the fact that, by seeking to move the southeast corner of sec. 4, BLM has called into question all of the evidence and testimony in support of its case regarding ties between this corner and the south 1/4 corner, sec. 4.

Department of Highways, which claimed to have "found [the corner] in 1917" (Tr. 82). The field notes of the dependent resurvey specifically state that the Jones survey corner is "identical with the position of the Nevada Highway Department survey tie in 1919 and 1930" (Govt. Exh. 35 at 5). The record contains an April 12, 1919, State right-of-way map (Govt. Exh 5), which gives a specific all to the 1/4 corner.

Neil R. Forsyth, who was in charge of the dependent resurvey, testified that BLM used a call given in the 1917 field notes of the State highway department (Govt. Exh. 6D (Sheet 3 of 4)) gives a specific call to the "found" 1/4 corner. The corner established by the State highway department was also used to describe private land in two deeds, dated August 26, 1919, and November 8, 1940, to the State of Nevada for the purposes of a public highway. See Govt. Exhs. 7, 8; see also Tr. 153-54.

Walter L. Neitz, a registered land surveyor who participated in the preparation of the Jones survey, testified that, in addition to relying on "highway information," an effort was made to locate the original corner monument (Tr. 227-28). The Jones survey found neither a post nor an earth mound, which Neitz felt would have disintegrated over the

years (Tr. 235, 257). Instead, a "small rock pile" was found (Tr. 227). Digging down at that point "about a foot and a half or so," the Jones survey "found the remnants of the old mound, which was about 3 feet or so in diameter and approximately 2 feet high" (Tr. 228). This mound was actually a "rock mound" (Tr. 232). Neitz testified that he did not consider this mound to be the original 1881 monument, but a remonumenting of the corner, which was often done in the case of earth mounds (Tr. 252-53, 257-58). The Jones survey also found the "remains of a tree stump," badly decayed, which was located approximately 67 links distant, bearing N. 81 degrees W., which he considered to be "very close" to the record call for the bearing tree [5] (Tr. 231-33). Neitz described the tree as an "old notched tree," stating that it had "a chop mark on it, but no scratch marks" (Tr. 231-32).

In his September, 1985 decision, Judge Luoma did not accept BLM's location of the south 1/4 corner, referring to the lack of testimony regarding the State highway department's

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5/ Neitz testified that, in most cases, a 1/4 corner would have two bearing trees (Tr. 243). However, he was unable to state whether here were other trees at the time of the 1881 survey which could have been scribed (Tr. 243-44).

"methodologies" and "BLM's reconstruction of a purported monument" (Decision at 7, 12). We also find that there is a definite absence of any testimony regarding how BLM or the Jones survey translated the State highway department right-of-way maps and field notes into a fixed location for the 1/4 corner. Moreover, even assuming that this can be done, [6] the accuracy of BLM's location of the corner is totally dependent on the accuracy of the State highway department's determination regarding the location of this 1/4 corner. There is, however, little or no evidence regarding what the State found at the purported corner or what, if any, resemblance it bears to the original monument described in the 1881 survey field notes. [7] We are simply unable

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6/ Neitz testified that the 1939 State right-of-way map could be used to reestablish the 1/4 corner to "within less than a foot" of the call (Tr. 236-37, 255-56). However, the call was given to the center line of the highway right-of-way and then to the southwest corner, sec. 4, which is also dispute (Govt. Exh. 6D (Sheet 3 of 4); see Tr. 256-57).

7/ Appellants refer to a copy of the State highway department's field notes, dated Nov. 25, 1938 (Govt. Exh. 5C), which they claim describes, in the following notation, the south quarter corner as located by the State: "Mon. rocks, No marks, Probably 1/4." There is no indication in the record that this notation refers to the south 1/4 corner. Assuming it does, the monument is clearly not the original monument described in the 1881 survey field notes.

to test the "bona fide character" of the evidence regarding the State highway department's location of the 1/4 corner (Survey Manual at 5-11). Moreover, the location of this corner is not supported by other collateral evidence that BLM's south 1/4 corner bears a "proper relation to know corners" or agrees with the 1881 survey field notes regarding distances to various intervening calls to the east and west (Survey Manual at 5-9). The monument discovered by the Jones survey is admittedly not the original monument. Appellants also state they were unable to find any evidence of the tree stump described by Neitz and BLM's dependent resurvey makes no mention of that stump. The field notes for the resurvey state: "There is no remaining evidence of the original bearing tree" (Govt. Exh. 35 at 5).

We note that the relevant record of the Jones survey (Govt. Exh. 16 (Sheet 3 of 9)), when describing bearing trees for the south 1/4 corner, states: "None." However, Forsyth testified that BLM had found a tree stump, but that it could not be considered a bearing tree because "there was no scribing on it" (Tr. 266). That tree appears in Government exhibit 71. Nevertheless, appellants also argue that in the area of BLM's purported corner there were other trees which could have also been used as bearing trees in 1881. The fact that they were not undercuts our ability to accept that corner location as 1/4 corners were generally tied to at least two bearing trees. Page 32 of the May 3, 19981, "Instructions of the Commissioner of the General Land Office to the Surveyors General of the United States Relative to the Survey of the Public Lands and Private Land Claims" (1881 Instructions) (found in C. Albert White, A History of the Rectangular Survey System (BLM), which were issued prior to the June 15, 1881, contract under which Stewart and Conkling executed the 1881 survey, provided that, where the requisite number of bearing trees can be found within 300 links of the corner point, "two (2) [bearing trees should be established] for every Quarter Sec. Cor." In addition, page 10 of the June 1, 1864, Instructions

to the Surveyors General of the United States, Relating to their Duties and to the Field Operations of Deputy Surveyors (1864 Instructions) (found in C. Albert White, A History of the Rectangular Survey System (BLM)), provided that, in the absence of the requisite number of bearing trees not less than 2-1/2 inches in diameter, "a pit two feet square and not less than twelve inches deep is required." We note that the 1881 survey notes state that, in addition to the one bearing tree, the surveyors "dug pit 24x18x12 [inches], 8 [links] North." No evidence of this pit was found by BLM or Jones.

Robert C. Downer also testified to the existence of other suitable bearing trees which would have been standing in 1881 "within forty or fifty feet" of BLM's corner (Tr. 376). Lacel E. Bland, Chief of the Reno, Nevada, Branch of Cadastral Survey, BLM, who accepted the dependent resurvey, admitted the possibility of other suitable bearing tress, but testified that he had encountered instances where they were simply not used (Tr. 338-39; see also T. 260). In any case, regardless of whether other trees should have been marked, the record does not establish that the tree stump was the bearing tree referred to in the 1881 survey field notes. The fact that this monument appears at the location of

the State's corner may simply confirm the highway department's placement of a monument as early as 1917 or later, rather than evidence of a remonumentation of the original corner. We cannot conclude beyond a reasonable doubt, that either the rock pile or the rock mound (discovered at an unexplained depth) is a perpetuation of the original monument. See Edward G. McClellan, 11 L.D. 93, 96 (1890); cf. Mr. & Mrs. John Koopmans, 70 IBLA 75 (1983); Rubicon Properties, Inc., A-30748 (Mar 6, 1968).

Quarter corner as described by appellants

Appellants are also unable to point to the discovery of the original monument at the south 1/4 corner. Nevertheless, they argue that they have found evidence of the original bearing tree. Downer testified that he discovered a ten-inch stump, of a pine tree, which had been cut off a foot,

or less, from the ground, the only pine stump in quite a large radius. There is a lot of junipers around there, but there are no other pines within this radius. And all the trees around there are pretty small. This was probably the only tree capable of being blazed at that time. This is the reason why

they did not have two blazed trees.

(Tr. 373-74). He was unable to identify any blaze on the stump because "it was cut off too low" (Tr. 374); see Tr. 513-14, Tr. II 36-37). [8] In accordance with "Instructions to Surveyors General of Public Lands of the United States for those Surveying Districts Established in and since the Year 1850" containing also a "Manual of Instructions to Regulate the Field Operations of Deputy Surveyors, illustrated by Diagrams" (1855 Instructions) (found in C. Albert White, A History of the Rectangular Survey System (BLM)), at page 8, bearing trees were to be blazed in part with the letters B. T. "as near the ground as practicable." Apparently Downer regarded the tree as cut off below that point. By itself, the evidence of the existence of the tree stump, however, does not establish the location of the 1/4 corner where there is no indication that it is the remains of the bearing tree referred to in the 1881 survey field notes. [9] See Vern Johnston Logging Co., A-28760 (Aug. 8, 1962).

Relationship to calls in 1881 survey notes

We turn now to the various related calls along

the boundary between sec. 4 and sec. 9 which both appellants and BLM argue support their location of the south 1/4 corner. Appellants contend that the accuracy of their corner, versus BLM's, is demonstrated by the record distances to an undisputed corner, i.e., the southeast corner of sec. 4. Appellants state that their corner is 18 feet short of the record distance of 2,631 feet, whereas BLM's corner is 187 feet short. Neitz testified that the corner in the Jones survey, accepted by BLM, was actually short by 175 feet, which was acceptable "in that type of terrain" (Tr. 253-54). See Appellants' Exh. D. Neitz testified that the discrepancy in distance was probably due to the fact that the original surveyors were slope chaining, trying to "correct for the vertical differential," rather than level chaining (Tr. 254-55). He stated that, in his surveying experience in rough terrain in northern California, Nevada, Idaho, and Utah, he had found original section corners "as much as four to six hundred feet out of position" (Tr. 255).

8/ The transcript of the hearing proceedings in Minden, Nevada, on June 25, 1985, were separately paginated from the rest of the transcript and, accordingly, will be referred to as Tr. II.

9/ Bland testified that BLM was concerned with "inconsistencies" in appellants' evidence of the 1/4 corner because of a shift in appellants' location of that corner between the 1965 and 1982 surveys (Tr. 323-24). Downer admitted that the 1965 survey was "incorrect" (Tr. II39). We cannot find fault with a change of opinion if the change is based on subsequently gained information.

The 1881 Instructions, at page 20, provide that the "length of every line you run is to be ascertained by precise horizontal measurement." On "uneven ground," the surveyors were required to keep the chain stretched and "horizontally leveled," Id. (Emphasis omitted). And when ascending and descending steep ground, hills, or mountains, the chain was required to be shortened to one half its length (and sometimes more), in order accurately to obtain the "true horizontal measure." Id. at 21; see Tr. II 67-68. There is no evidence that Stewart and Conkling did not horizontally level the chain on uneven ground or generally determine the accurate horizontal measurement. The Survey Manual, at 5-23, also indicates that use of the Gunter's link chain in the early surveys often caused inaccuracies "in measuring steep slopes." However, in the 1881 survey field notes, the terrain is described as "rolling." Moreover, because survey field notes are deemed "presumptively correct" and must be "taken as true" until disproved by a preponderance of the evidence, we must initially presume that the figures given in the notes, including those regarding distances, are correct. Sutton v. Mississippi, 7 L.D. 562, 564 (1888).

BLM also points to a discrepancy as to the south line of sec. 12 between the 1881 survey and a partial subdivisional survey of T. 11 N., R. 21 E., MDM, Nevada, by H. W. Reppert in 1913 (Appellants' Exh. B), particularly regarding calls to a gulch and ridge. See Tr. II at 14-19. However, Reppert did not report finding the gulch described in the 1881 survey field notes and, as noted infra, a ridge is an indefinite call. We are not persuaded by this evidence. In addition, Reppert stated that: "[C]onsidering the rough mountainous nature of the country within this township, the bearings and distances might be considered above the average of those found in most of the older surveys" (Appellants' Exh. B at 14).

In his posthearing brief at page 21 (Downer's brief consists of four documents which have been repaginated sequentially in the case file by the Board for ease of reference), Downer stated that: "The average error of closure in steep country is in my experience less than 30 feet, and many times almost exact, in tracing the old surveyors." We, therefore, conclude that even a 175-foot (or 2.65-chain) deviation from the record distance was enough to raise doubts about the accuracy of BLM's location

of the south 1/4 corner. If the southeast corner i
moved, as BLM proposes, the discrepancy will h
greater.

Quartz ledge

The first call in the 1881 field notes proceedin
westerly from the southeast corner of sec. 4 is
quartz ledge located at 2.72 chains. [10] Downe
testified that he found such a ledge "exactly matchin
the call" (Tr. 378). Forsyth testified that BLM di
not "tie out" at the quartz ledge because that ledg
"and the top of the spur is all about the same plac
in there" (Tr. 265). Downer testified that "ther
is quite a lot of quartz rock here, so that yo
couldn't miss" (Tr. 378). Photographs of this are
(Appellants' Exhs. R and S) do depict a ledge
However, the

10/ The evidence indicates that the term "ledge" referred to
quartz outcrop rather than a vertical face.

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ledge is of little help in locating the 1/4 corne
as it is to close to the SE corner that both the BL
and Downer calls are within reason. It simply doe
not afford a "definite connection" (Survey Manual a
132). See Frank Lujan, 40 IBLA 184, 189-90 (1979)

appeal dismissed, Lujan v. U.S. Department of the Interior, Civ. No. 79-455C (D.N.M. Feb. 11, 1980), appeal dismissed, 673 F.2d 1165 (10th Cir.), cert. denied, 459 U.S. 969 (1982) ("foot of the bluff"). If, however, the corner is moved as the dissenting opinion proposes, this ledge would become important, as it supports appellants' location of the boundary line.

Top of ridge

The next call was the top of a ridge located at 9.72 chains. Downer testified that what he found at that point was "not really a top of the ridge, but a very great change in slope" (Tr. 443). He stated that: "This was very steep, almost like a cliff, up to here (indicating). Then it did level off, but it was actually not the top. It just became a very gentle slope up to some point in between here (indicating), a very flat summit" (Tr. 378). Forsyth testified that BLM found the top of the ridge along its south line at about 5.87 chains (Tr. 265). From Downer's description, it appears difficult at best to discern what the surveyors in 1881 considered the top of the ridge. Therefore, this call also cannot be relied upon.

Tunnel

The next call is to a tunnel located at 19.7 chains (60 chains from SW Cor., Sec. 4) which "bears

south," 1 chain from the line. Downer testified that appellants' south line passed "about 1.3 chains north" of the tunnel (Tr. II 43). Downer also calculated the distance from the south 1/4 corner to the point on appellants' south line immediately north of the tunnel, as being 22.73 chains (Tr. 508). Bland testified that appellants' distance is actually 23.98 chains (Tr. 315). The record distance is 20.14 chains. [11] By contrast, Bland testified that BLM's south line passes "the north edge of the tunnel" (Tr. 97; ss Tr. II 66). Bland and Forsyth testified later that BLM's line was actually 0.15 chains north of the center of the tunnel (Tr. 123, 263-64). Bland, noting that the tunnel "with the overburden is about two chains in length," testified: "[W]e picked about the middle of the tunnel to tie into or where it's caved in" (Tr. 317-18). The point on BLM's south line at the tunnel was 21.40 chains from the south 1/4 corner (Tr. 123; see also Tr. 509).

11/ Downer explained the discrepancy by the fact that the actual call to the point along the south line was given as 60 chains east from the southwest corner of sec. 4, i.e., "to the nearest 10 chains" (Tr. 43). Downer stated that such a call was "not as precise as when they say 16 chains" (Tr. 44). The Survey Manual, at 5-16, states that: "Early field notes often appear to have shown distances only to the nearest chain or even a wider approximation."

We find the evidence regarding the location of the tunnel casts doubt on the location of both the BLM and the Downer 1/4 corners. In one way or another the tie does not match that in the field notes. We find, however, that the measurement from the tunnel to the boundary line between sections 4 and 9 clearly supports the location of the boundary as being closer to that depicted by appellants than that depicted by BLM. [12] Given that it is likely that the surveyors would have tied to the center of the tunnel entrance, appellants' line clearly passes some distance north of that point, whereas BLM's line does not.

Line blazes

Appellants also argue that their south line "passes very old, directional line cuts, made by axes, and a blazed dead tree, undatable due to moisture and decay" (RB-B at 3). Downer testified that he found blazes east of the south 1/4 corner (Tr. 377). However, he did not regard them as "line trees" because they were "not called out in the notes," but considered them to be "blaze trees on line, on or near line" (Tr. II 44). Although there is no mention

of line trees in the 1881 survey field notes, the 1881 Instructions also provide:

> A sufficient number of other trees standing within 50 links of the line, on either side of it, are to be blazed on two sides diagonally, or quartering toward the line, in order to render the line conspicuous, and readily to be traced, the blazes to be opposite each other, coinciding in direction with the line where the trees stand very near it, and to approach nearer each other the farther the line passes from the blazed trees. Due care must ever be taken to have the lines so well marked as to be readily followed, and to cut the blazes deep enough to have recognizable scars as long as the trees stand.
>
> Where trees 2 inches or more in diameter are found, the required blazes must not be omitted. [Emphasis in original.]

Id at 21. Thee is no requirement that these blazed trees be noted in the field notes. Id. at 43-44. Accordingly, appellants' evidence of a blazed tree supports appellants' location of the south line between the southeast and south 1/4 corners of sec. 4. Rules for the Restoration of Lost and Obliterated Corners, 1 L.D. 671, 678 (1883). The location of the blazed tree appears on appellants' exhibit D very near to appellants' south line. See Appellants

Exh. B at 7.

Carer's House or Carter's Station

The next call is to "Carter's House." The 1881 survey field notes state that at a point approximately 3 chains west of the south 1/4 corner the house "bears S. 12-1/2° E. 16 [chains distant]." The record

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12/ One would expect that if there were errors, the errors would be more likely in longer traverses than in shorter ones.

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establishes that the house was actually part of a group of buildings, including a barn, shed, corrals, and various outbuildings, operated by William Carter as a freight station along the Bodie Stage Road, which have been largely obliterated by subsequent road construction. Downer testified that the "southerly foundation of the barn is still visible" (Tr. 375). The location of Carter's station is not in dispute. Downer testified that he established a point 16 chains bearing S. 12-1/2° E. from a point 3 chains west of appellants' south 1/4 corner which fell near the center of the complex of buildings, "between the barn foundation and the known site of Carter's house" (Tr. 454; see Appellants' Exh. F at

6). That point was about 50 feet south of the barn and somewhat north of the house (Tr. 375).

In its posthearing brief (Brief) (Appendix A IV), BLM asserted that appellants' actual tie to "Carter's House" from a point 3 chains west of appellants' quarter corner was S. 19° 37' E., a distance of 16.98 chains. By contract, using BLM's quarter corner, Downer testified that a comparable point would be "230 feet [3.48 chains] south of Carter's house" (Tr. 376; see Appellants' Exh. F at 6). Forsyth testified that with a bearing of S. 14° 18' E. from a point 3 chains west of BLM's south quarter corner, Carter's station was 12.73 chains distant, 3.27 chains short of the record distance (Tr. 262-63, 278).

The discrepancy in the distance from the point on BLM's south line to Carter's station is attributed by Forsyth to the fact that the original surveyors "never measured the distance" (Tr. 87). Forsyth speculates that the surveyors never went to Carter's house, as indicated by the fact that a creek is incorrectly depicted on the 1881 survey plat (Govt. Exh. 2) as south of "Carters" [13] (Tr. 316). Forsyth also testified that, from the point on BLM's south

line tied to Carter's station, the station would have been visible, whereas, from the point 3 chains east of appellants' 1/4 corner on appellants' south line, the station would not have been visible (Tr. 89) The fact that the station is not visible from appellants' point is admitted by Downer and confirmed by Judge Luoma after a personal examination of the site. (Tr. II 64; Decision at 4). Forsyth testified that, at the time of the original survey, "[i]f they couldn't see something, they didn't tie it in" (Tr. 89). Thus,Forsyth explained that rather than tying the south line to Carter's station to the 1/4 corner where the station was not visible, the surveyors chose another point along the line (Tr. 280-81). Downer, on the other hand, speculated that the surveyors chose another point along appellants' south line, rather than the 1/4 corner, to tie to Carter's house in order to avoid crossing a steeper ridge (Tr. 376-77). Downer also speculated that the surveyors could instead have started at Carter's house and picked a route "where there were not too many

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13/ Downer asserted that the surveyors were likely familiar with the station because Carter had the "only facilities for several miles for food and drink" (Tr. 449).

trees" back to the section line [14] (Tr. II 118). Downer testified that, in any case, crossing the ridge would have simply involved the process of "whittling in" (Tr. II 117-18).

In his September 1985 decision, Judge Luoma ordered a resurvey on the basis of the "many deviations from the original calls and distances in BLM's resurvey," citing in particular the fact that "[a]ppellants' distance to Carter Station is closer to the record distance" (Decision at 12-13). Indeed, given BLM's south 1/4 corner, and, using the record bearing of S. 12-1/2° E., the record distance of 16 chains from a point 3 chains west of the corner considerably overshoots both the house and barn. Even using a bearing of S. 14° 18' E., which varies from the 1881 survey field notes, the distance considerably overshoots both the house and barn. [15] We, like Judge Luoma are unwilling to accept speculation that the discrepancy is due to the fact the surveyors never travelled to the station. [16] By contrast, given appellants' south 1/4 corner, using the record bearing of S. 12-1/2° E. and the record distance of 16 chains from a point 3 chains west of the corner, falls in the midst of Carter's station, just south of the barn. BLM, however, points out

that the original call was to "Carter's House," and that meeting this call results in a bearing of S. 19° E. given appellants' quarter corner.

We note that, in the 1881 survey field notes, the word "Carter's" is handwritten, while the word "House" is printed. It is possible that, in preparing the notes, the surveyors neglected to correct the printed material. However, even more persuasive that the surveyors meant to tie in the barn rather than the house is the fact that the 1881 survey plat (Govt. Exh. 2) places "Carters" north of the ravine. BLM asserts that this demonstrates the fact that the surveyors never travelled to Carter's station. Rather, we conclude that it demonstrates that the surveyors tied to the barn which was north of the ravine, rather than the house which was south of the ravine. Appellants also argue that:

> From the barn they could chain to the section line by a relatively open route where there were no large trees, and without crossing the ravine. The barn was the center of activity at this busy way station for the teamsters and stagecoach drivers during this period, which was during the Bodie mining boom.

14/ Bland testified that, if the surveyors had started at Carter's house, they would have run "due north instead of north 12-1/2 degrees west, which [they] would have nearly intersected

the quarter corners of either, * * * within 200 feet" (Tr. 317).

15/ Appellants also note that this call can be looked at in terms of how far south Carter's station is from the section line. The record distance is 1,031 feet. They calculate that Carter's station is only 800 feet south of BLM's section line, whereas, using a bearing of either S. 12-1/2° E. or S. 19° E., the station only deviates from the record distance by at most 32 feet from appellants' section line.

16/ The station provided solid and liquid refreshments and lodging at the time of the survey. One could assume they may have stopped by on one or more occasions.

(RB-A at 4). There is a great deal of speculation whether the surveyors tied in Carter's station by proceeding from the section line southeast or from the station northwest back to the line. We accept that it is possible that the surveyors started from the line, as determined by appellants, even though Carter's station was not visible using the process of "whittling in," or that they started from the station and intersected the line. Furthermore, we accept that it is possible the surveyors did not proceed due north from the station or due south from the 1/4 corner in an effort to avoid "chaining over the top of a hill through a forest of pinenut trees, and then down the other side" (RB-A at 5). However, we simply do not know what the surveyors did. The fact remains that BLM's 1/4 corner does not match the call to "Carter's House," whereas appellants' corner does, within a reasonable level of tolerance.

This also raises doubts as to the accuracy of BLM's location of the south 1/4 corner. Cf. J. M. Beard (On Rehearing), 52 L.D. 451 (1928).

Bearing of the section line between secs. 4 and 9

There is also the matter of the 5-degree deflection in the south line as a result of BLM's placement of the 1/4 corner. Neitz admitted that the deflection is about 4 degrees and 33 minutes, which would have caused the surveyors some concern (Tr. 246-47). However, no mention is made of that deflection in the 1881 survey field notes. Downer asserts n his posthearing brief at page 15 that the resulting bearing from the south 1/4 corner to the southeast corner of sec. 4 is N. 85° 45' E. See Tr. 404. BLM's dependent resurvey map (Govt. Exh. 34) gives the bearing as N. 84° 48' E. The record bearing is N. 89° 56' E. By contrast, the bearing from appellants' 1/4 corner is N. 89° 49' E. [17]

On appeal, BLM admits a 5-degree deflection in the south line but contends that the deflection can now be "reduce[d]" by declaring the southeast corner of sec. 4 lost and reestablishing the corner by double proportionate measurement. BLM quotes the following testimony of Forsyth: "We did not find a corner of [secs.] 3, 4, 9 and 10. We accepted evidence that was used by other people. We felt that that was not the corner, but we couldn't prove

it, so we accepted that" (Tr. 275). BLM asserts that the reestablished southeast corner would bear N. 86° 13' E., a distance of 39.75 chains, from the south 1/4 corner. [18] The record distance is 39.86 chains. While this would virtually eliminate the deviation from the record distance, the resulting

17/ In RB-B at page 4, appellants assert that the bearing is actually N. 89° 31' E. Downer testified that the bearing is N. 89° 33' E. (Tr. 403). Appellants' exhibit D gives the bearing as N. 89° 33' 21" E.

18/ BLM states that the corner would be moved 0.75 chains south and 2.6 chains east, us in the east 1/4 corner of sec. 9, the south 1/4 corner of sec. 4, the southeast corner of sec. 3, and the southeast corner of sec. 2. The obvious problem with this method is that it assumes the accuracy of the south 1/4 corner of sec. 4. Moreover, BLM admits that it assumes "no intervening corners could be found" to be used as control corners (Brief at 4).

bearing is still off by 3° 43', which is a significant deviation. See Gilbert & Logie Nolan, A-30905 (Aug. 8, 1968). Appellants also argue that moving the southeast corner would cause the corner to fall "completely out of agreement" with the calls at that corner (RB-B at 1; see also footnote 4). Appellants note that the accepted corner was "perfectly" in agreement with three calls to a tunnel, a gulch, and a quartz ledge (RB-A at 3). We note that the Jones survey, which was accepted by BLM as locating the

southeast corner (TR. 276), found a stone mound at this point which matched the original calls to evidence of an old tunnel and the bottom of a draw. See Govt. Exh. 16 (Sheet 3 of 9). BLM has presented no evidence supporting its contention that this corner should not be accepted. Forsyth testified only that the accepted corner did not match the original calls (Tr. 275). However, he also admitted that moving the southeast corner would mean that the tunnel described in the 1881 survey field notes would be "one chain" north of the south line of sec. 4. Id. Those notes clearly establish that the tunnel bears one chain south of the line (Govt. Exh. 3). We are unwilling to believe that the original surveyors could not distinguish north from south, however inaccurate they may have otherwise been. BLM has simply provided no justification for moving the southeast corner of sec. 4, which was accepted in the dependent resurvey "as a careful and faithful perpetuation of the position of the original corner" (Govt. Exh. 35 at 3, emphasis added). Accordingly, the 5-degree deflection remains. It is apparent that Judge Luoma, in ordering a resurvey, relied in part on this "five degree bend in BLM's south line" (Decision at 12). Indeed, it indicates that BLM's south 1/4 corner does not bear a "proper relation to

known corners" (Survey Manual at 5-9). We find th belatedly proposed solution to an obvious discrepanc in the resurvey does not solve the problem: Rather it compounds it.

Stage road to Bodie

We turn next to the calls west of the south 1 4 corner of sec. 4. The first call, located at 51.2 chains west of the southeast corner, is: "Cros Stage Road, to Bodie bears N.W. & S.E. and ascend. Appellants and BLM dispute the location of the Bodi road, which was abandoned and has been largel obliterated over the years. Bland testified tha BLM identified the location of the road first usin an 1893 reconnaissance map (Govt. Exh. 39), whic depicts a road running northwesterly from "Carters with a "definite left turn or a different angle curve in the road where the wash from the northeas comes in and crosses the road" (Tr. 310). Blan noted that this road, with its distinctive bend also appears in a 1974 orthophotograph of the are (Govt. Exh. 40) and a 1938 aerial

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19/ There was some testimony by Downer that BLM's placement o the south line of sec. 4 would also reduce the homestead originall patented to Carter in 1881, which totalled 160 acres, by 2 acres (Tr. 40, 117). In his decision at page 7, Judge Luom mentioned this problem, but did not expressly attribute an importance to it. BLM now argues that the loss in acreag cannot be calculated until sec. 9 is properly "subdivide[d], which would involve reestablishing the south and west 1/4 corners.

photograph of the area (Govt. Exh. 41) (Tr. 310-11). BLM has either placed or superimposed section lines for sec. 4 on each of the exhibits.

The lines on the 1893 reconnaissance map constitute "a very rough sketch" by Eugene Faust, a cartographer with the Geological Survey, done at the hearing (Tr. 290). Faust stated that there is "very close" agreement as to the depiction of the Bodie road between the three exhibits (Tr. 292). This agreement is purportedly illustrated in an overlay for the 1974 orthophotograph (Govt. Exh. 40A), which is a blow-up of a portion of the 1893 reconnaissance map (Govt. Exh. 39) (Tr. 289-90). The 1938 aerial photograph also has two overlays (Govt. Exhs. 41A and 41C), which depict the section lines for sec. 4, as determined by appellants and BLM (Tr. 312).

The field notes of the dependent resurvey (Govt. Exh. 35 at 6) also state that BLM found a "[b]laded road." Bland testified that the distance to BLM's placement of the Bodie road from the south 1/4 corner along BLM's south line is 11.40 chains, and the distance along appellants' south line is 8.97 chains (Tr. 312-13). The record distance is 11.36 chains (Govt. Exh. 3).

The underlying premise to BLM's location of the Bodie road is, of course, that the 1893 reconnaissance map accurately depicts that location. We note, however, that the 1881 survey plat (Govt. Exh. 2) shows no distinctive bend in the road within sec. 4. Appellants have also called into question the accuracy of the 1893 map. Downer testified that he compared the measurements between Carter's station and Sugarloaf Mountain on the 1893 map and a 1957 Mt.Siegel Quadrangle map, prepared by Geological Survey, and that there was a discrepancy of "over 800 feet" (Tr. 382). He later testified that he found "about 1000 feet * * * difference in a length of about four and a half miles" (Tr. 464). Appellants argue that: "The 1893 topographical map was sketched by govt. surveyors using plane tables and alidades set up at mountain top triangulation stations and was not intended to portray accurate locations, but was very useful in portraying the terrain and roads in a general, small scale manner" (RB-A at 5). We also note that there is a definite inaccuracy in the depiction of topographic and geographic features in the 1893 map, which is very evident when comparing the 1974 orthophotograph and its overlay, which is a blow-up of a portion of the 1893 map. See Tr. 470. The inaccuracies seriously call into question the

accuracy of the depiction of the Bodie road on the 1893 map. What was said with respect to topographical features pictured on survey plats in J. M. Beard (On Rehearing), supra at 456, applies equally herein:

> It should be remembered that the position of items of topography in the interior of sections, as shown upon the plats of the public-land surveys, have been in the past and are in surveys executed by the cadastral engineering service at the present time, almost invariably based upon estimates by the surveyor, rather then upon actual measurements thereto. It is ordinarily only the distances at which section lines intersect various items of topography that are actually measured on the ground. The platted position of topography in the interior of sections therefore depends entirely upon the individual skill and ability of the surveyor in estimating directions and distances, and at best represents only an approximation of the actual position of the topography.

Downer also argues that the 1893 map depicts an alternative route for travel to and from Bodie, i.e., a "lower route" which runs "along the creek" and would be used by "teamsters caught by nightfall before reaching Carters, or by stock drovers needing a place to regroup cattle or to spend the night off

of the main road" (Downer's Posthearing Brief at 9). He further argues that the upper, rather than the lower, route constitutes the main road:

> Bodie Rd. was a franchised toll road (Bryant Toll Rd.), and a fee was charged for each man, animal, and vehicle which passed over it. A lot of livestock were driven loose over the route.
>
> A teamster or driver proceeding from Carson Valley to Bodie with a loaded freight wagon or stagecoach, after a long climb out of the valley, arrives at a point a few hundred feet north of the present west 1/4 cor. Sec. 4. Here the road splits. If he takes the road to the left, or to the east, he will continue to climb at the same steady rate toward Carters, on the road shown on the 1881 plat and on the 1923 plans. However, if he takes the road to the right, he will drop down toward the creek bottom, and proceed along it at a much lower elevation than the upper road.
>
> When he reaches the ravine, he will climb a steep grade for about 600 ft. to regain the lost elevation and rejoin the upper road at a point south of the ravine. This steep grade is between 10 and 15 percent. There are no grades this steep on the Bodie Stage Road across the Pinenut Range, except for short dips where crossing ravines. In the winter this stretch along the creek and the long climb up crossing the ravine would be difficult during wet weather due to mud and ice. In any weather it would be very taxing to his team of

horses.

Id. Downer concludes that:

> It is inconceivable that the early day teamsters and stagecoach drivers, hauling heavy loads to the Bodie mines would have used the lower "detour" route along the creek, with its adverse grade, steep pitch and washouts. They would have certainly have taken the upper, more direct, "traveled way" route, with its steady 5% grade.

(RB-A at 5). Downer contends that the lower roue was adopted later by the State highway department as a detour road "because it stays to one side of the new highway construction" (Downer's Posthearing Brief at 9).

Appellants assert that the upper route appears as a "travelled way" depicted on the 1923 Plan and Profile of Proposed State Highway (Appellants' Exh. F (Sheets Nos. 6 and 7) and that the detour road is depicted on a 1940 Material Deposits and Detour Sketch (Appellants' Exh. G). Downer plotted the detour road in part on the 1923 plan (Tr. 458). He also located the two routes on the 1938 aerial photograph (Tr. 461-63, 468, 516). We note that the "travelled way" crosses and recrosses the proposed

route of the highway near the west line of sec. 4, where as the detour road stays to the southwest of the line of the highway. Unfortunately, the travelled way is not shown crossing the south line of sec. 4 in the 1923 plan. Indeed, it disappears from the 1923 plan just east of the west line of sec. 4 and does not reappear until south of the south line. [20] Nevertheless, the evidence is sufficient to establish that the "travelled way" was distinct from the detour road. Whether that "way" was the upper route and the detour road was the lower route, as appellants contend, is another question.

We accept that the "travelled way" depicted on the 1923 plan is the Bodie road. Downer verified that the 1923 plan depicts the Bodie road in part by the fact that the plan has the travelled way crossing within 20 feet of the record distance to the southeast corner of sec. 9 (Tr. 383-84). The way also follows generally the route depicted in the 1881 survey plat. Moreover, thee is no evidence of any other well-travelled road in that area which would have been found in 1923. Indeed, Downer testified that this road was the "only existing travelway in the area when they made the first location survey in 1917" (Tr. 459). BLM's only argument on appeal is that it is "not unusual for the location of roads to be changed in desert country" (Brief at 8). However,

BLM has not tendered any evidence to establish that, in fact, there were any such changes in the location of the Bodie road. Nonetheless, as noted supra, the road does not appear on the 1923 plan at the crucial points. We cannot tell whether the road continued to generally follow the route of the proposed highway or diverged and followed the route of the detour road or another route. The best evidence depicting the Bodie road as it crosses the south line of sec. 4 is still the 1881 survey plat. Moreover, Downer testified that he found traces of the Bodie road as it crosses the south line:

> We found huge dray horses' shoes down in there. * * * Huge horseshoes from work horses. And it was very obvious, the opening through the trees, although it had been many, many years. There was still an opening through there and to go the other route, there would have [been] trees. They would have had to dodge around trees. So that was the obvious road.

[(Tr. 372). Downer stated that this road crossed appellants' south line at "very close to proper distance on the call." Id. In Downer's posthearing brief at page 23, the distance given from appellants' south 1/4 corner is

20/ Downer testified that the travelled way was only depicted on the 1923 plan where the proposed highway "crossed" that route (Tr. 383; see Tr. 373, 457-58).

11.36 chains, exactly matching the record call. By contrast, appellants point out that the distance along BLM's south line from the south 1/4 corner to the crossing of appellants' placement at the Bodie road is 8.56 chains, 2.8 chains off the record distance (RB-B at 2).

Thus, whether appellants' or BLM's south line of sec. 4 matches the call to the Bodie road depends on whether we accept appellants' or BLM's location of the Bodie road. The best available evidence, namely the 1881 survey plat and Downer's testimony of what he discovered on the ground where the road depicted on that plat crosses the south line of sec. 4, supports appellants' location of the Bodie road. [21] See Appellants' Exh. P. BLM never contradicted Downer's on the ground identification; rather, Bland merely testified that appellants' crossing of the section line could not be verified on the 1938 aerial photograph (Tr. 313-14). Thus, accepting appellants' location of the Bodie road, appellants' south line matches the call from the south 1/4 corner and BLM's line does not. We note that Judge Luoma was likewise persuaded. See Decision at 13. As previously noted,

this also raises doubts as to the accuracy of BLM's location of the south 1/4 corner.

Bodie telegraph line

The next call is to the "Bodie telegraph line," which crosses the south line of sec. 4, bearing northwest and southeast, at a distance of 12.36 chains from the south 1/4 corner. Forsyth testified that BLM did not find evidence of the telegraph line (Tr. 261). Likewise, Neitz did not discover any evidence of the line (Tr. 245). However, Downer testified that they found "high up in the pine nut trees, old brackets for the old telegraph line" (Tr. 371). Robert G.Downer, Downer's son and a registered land surveyor and civil engineer, testified that they found one insulator about 40 feet north of the section line and another further north of that line [22] (Tr. 133-35). Downer testified that, although the telegraph line was a "zig-zag line," it would have crossed appellants' section line

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21/ The road in the 1893 map is plainly not the Bodie road depicted in the 1881 plat. Aside from the obvious inaccuracies in the 1893 map, appellants have offered a very plausible explanation for this discrepancy, i.e., the 1893 map depicts another route which was an alternative to the main road. This alternative route was picked up in the 1893 map and then, after it was converted to a detour road, appeared in the 1938 aerial photograph and the 1974 orthophotograph and was discovered by BLM during the dependent resurvey as a "bladed road." We note that there is a distinct similarity in configuration between

the road in the 1893 map and the road which appears in the 193 aerial photograph and the 1974 orthophotograph, as well as th 1940 detour sketch. In particular, there is in all cases th distinctive east-west bend in the road at approximately th same point. This strongly suggests that the road in the 189 map is now the detour road.

22/ In RB-B at page 4, appellants state that the two insulator were "north of the section line distant about 100 [feet] and 30 feet."

"fairly close to 27-1/2 chains," almost exactl matching the record call (Tr. 371-72). BLM does no dispute this. There is no evidence of where thi telegraph line would have crossed BLM's south line

Gulch crossing

The next call is "Cross Gulch, 20 lks. wide, Cours N.W.," 55.72 chains from the southeast corner o sec. 4 or 15.86 chains from the south 1/4 corner Bland testified that the distance from BLM's sout 1/4 corner to the gulch is 16.20 chains, whereas th distance from appellants' corner is 15.95 chain (Tr. 314). Downer testified that appellants' sout line met the record call "within five feet of recor distance" to the southeast corner (Tr. 371). In hi September 1985 decision at page 6, Judge Luom concluded that "[b]oth parties' measurements ar close to the record because the creek makes a southeas bend from Downer's south line of Section 4 to BLM' south line of Section 4." The evidence regardin

this call is inconclusive.

Additional blazes

Appellants also point out that their south section line west of the south 1/4 corner follows the route of a double-blazed tree and several old directional line cuts. Downer testified that the double-blazing which appears on the tree at breast height, on either side along the section line, was a "standard [surveying] practice" and that the blaze on the tree was age-dated to 1881 [23] (Tr. 370; see Govt. Exh. 31). Downer also regarded these trees as "blaze trees on line" (Tr. II 44). Again, the evidence of a double=blazed tree (located on appellants' exhibit D) supports appellants' location of the south line between the south 1/4 and southwest corners of sec. 4.

After reviewing all of the evidence regarding the location of the south 1/4 corner of sec. 4, we conclude that the corner is lost. Neither appellants nor BLM have established beyond a reasonable doubt that they have recovered the original monuments or accessories, the corner has been perpetuated, or collateral evidence locates the original position of the corner. However, the evidence regarding the record calls to the southeast corner of sec. 4, Carter's house, the Bodie road, the Bodie telegraph

line, the gulch, and the two blazed trees (east and west of the 1/4 corner), as well as the bearing of the south line of sec. 4, all support to appellants' location of the boundary between sec. 4 and 9, rather than BLM's.

23/ Downer also testified to finding another double-blazed tree, of which he was a "little doubtful" (Tr. 369). The blaze on this tree was age-dated "a little too early." Id. Government exhibit 30 indicates that the blaze was apparently made "after the growing season of 1877 and before the growing season of 1878."

Quarter Corner Common to Secs. 4 and 5

T. 11 N., R. 21 E., MDM

The monument at the west 1/4 corner is described in the 1881 survey field notes as follows: "Set Trachyte Stone 42x22x20, in Stone mound, 4 [feet] in diameter at base, by 2 [feet] in height" (Govt. Exh. 3). Both appellants and BLM contend that they have found the corner monument.

BLM's monument

The field notes of BLM's dependent resurvey state that BLM found a "granite stone, 14x6x4 [inches], firmly set in a mound of stone, plainly [marked] 1/4 on the [West] fact" (Govt. Exh. 35 at 8). This stone was accepted by the Jones survey (Tr. 238).

Forsyth estimated that the stone weighs 35 pounds, which could be moved around (Tr. 94; see Tr. II 88-89). He regarded the 1/4 marked on the stone as "very old markings" (Tr. II 110). This was disputed by Downer and Robert E. Jones, appellants' consulting geologist who believed the markings to be recent (Tr. 174; Tr. II 135-36). Bland also testified that:

> To my knowledge, there is no way to define how long a stone has been marked. I have seen marks that I thought were fresh and I looked at literally thousands of corners on the ground and what may look like a fresh mark, in turn, has to be the original survey. There is no way to define whether a rock has been marked 40 years, 60 years or 100 years.

(Tr. 329).

BLM's stone was examined by Jones, who testified that the stone was a fine-grained, siliceous volcanic rock or trapstone, which is distinguished from a trachyte stone by being a finer grained, intrusive as opposed to extrusive and more siliceous (Tr. 172-73). He stated that "[s]omeone might confuse it with trachyte" (Tr. 174). However, he also stated, when asked whether a surveyor before 1910 would know the difference between a trachyte stone and a trapstone, that, from his experience with cadastral survey,s the early surveyors were "very good on

their rock identification" (Tr. 192; see Tr. 197-99). We, of course, do not know the extent of the training of the original surveyors in the identification of rocks. Nevertheless, the accuracy of their identification can be determined by comparing the descriptions in their field notes with the descriptions of those found stone corner monuments recognized by all parties as being the original. Jones generally attested to the accuracy of the early surveyors. In addition, the 1881 survey field notes indicate that Stewart and Conkling refer to five different types of stone, viz., trachyte, granite, trapstone, quartz, and porphyry. See Govt. Exh. 3. This suggests a familiarity with the distinctions. [24] The evidence regarding the age of the

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24/ However, Government exhibit 50, which compares monuments left by Stewart and Conkling in an 1881 survey of T. 13 N., R. 21 E., MDM, Nevada, and those found during a 1973 BLM dependent resurvey, indicates that in six instances BLM found a granite stone where a trachyte stone had been described in the 1881 survey field notes. The stone sizes were fairly closely matched, however.

25/ Both Forsyth and Bland testified that the minimum size for the 1881 survey was 1,000 cubic inches (Tr. 270; Tr. II 89; see Survey Manual at 4-8). The 1881 Instructions at page 32 state that corner stones must not be "less than 504 cubic inches." In any case, the stone described at the west 1/4 corner of sec. 4 in the 1881 survey field notes was 18,480 cubic inches. In Frank Lujan, supra at 189, we found a "fairly significant disparity" between the size of the record stone (16x14x12 inches) and the size of the found stone (12x6x4 inches), but regarded this disparity as only raising "doubts." In so holding, we relied on testimony that the early surveyors often misdescribed stones in order to meet the minimum size.

26/ In his posthearing brief at page 6, Downer stated that the surface dimensions of the stone are 42x24x22 inches.

BLM's stone is inconclusive at best. However, most disturbing is the discrepancy in size between BLM's stone and the stone described in the 1881 survey field notes. Judge Luoma concluded that "it seems unlikely the field notes are describing a six-inch high stone" (Decision at 9). We and note that, in this respect, the BLM stone is "widely different from the record" [25] (Survey Manual at 5-7).

Appellants' monument

Appellants also found what they believe to be the corner monument, which is described as a trachyte stone embedded in the ground measuring 42x22x20 inches on the surface with a 1/4 chiseled on the west face [26] (Appellants' Exh. D; Tr. 391-92). Appellants did not find a mound of stones, which did not surprise Downer given the possibility of cloudbursts sending water through that drainage area (Tr. 487-88). Downer testified that the stone was a "vulnerable rock" susceptible to weathering, which made identification of the 1/4 mark difficult (Tr. 481-82). Nevertheless,

Jones testified that the stone had a 1/4 chiseled on it:

> When I examined the rock, thee was a fracture on the rock that had obvious chisel marks along it. There was a small marking on the upper side of the groove, which was approximately two inches long, a quarter of an inch deep, a half-inch wide. It had lichens in it.
>
> Below the slash and to the right was a -- the rock had been defaced but there was an obvious -- there is an obvious impression of a 4 on it.

(Tr. 170; see Tr. 177, 185). Appellants' witness Jones estimated the markings on appellants' stone to be at least 100 years old (Tr. 171). In Government exhibit 26, Francis Dickinson, a former Forest Service employee acting as a consultant to appellants, reported that he found the original monument with

"1/4 chiseled into the westerly face." Jones also estimated the weight of the stone to be 1,000 pounds (Tr. 183). Forsyth described the stone as 48x42x35 inches, weighing about 1,300 pounds [27] (Tr. 149). Appellants also offered the testimony of Dave Duryee, manager of a local masonry supply business,

who stated that 1/4 had been chiseled on the face of appellants' stone (Tr. 206-07). When asked how evident the mark was on the stone, Duryee testified: "You have to look for it. There is ind of a natural cleavage line that goes from the bottom of the rock up or whatever and then there is a 1, a very definite 1, as far as I am concerned, above that and below that, the 4 is there and it is rather vague but it is there" (Tr. 213).

Forsyth, however, testified that appellants' stone had no 1/4 marked on it and, indeed, "no evidence of chisel marks" (Tr. 284; see Tr. II 108). Forsyth also stated that the early surveyors never marked a stone in numbers "a foot high and six to seven inches wide" [28] (Tr. 150). Bland also could not find any "original chiseling marks" on the stone (Tr. 328-29; see Tr. II 90-=92). Faust testified that the stone was "not a marked quarter corner" (Tr. 294; see Govt. Exh. 28 at 1).

BLM has also questioned appellants' stone because the 1881 survey field notes refer to the fact that the surveyors "set" the stone, rather than that it was an in place stone. BLM suggests that the stone must have been smaller. Forsyth testified that setting a stone would involve moving a stone into position rather than using an inplace stone,

and that in any case the surveyor would have indicated what he did in his notes (Tr. II 112-14). BLM introduced a copy of the field notes of a 1900 subdivisional survey of T. 22 N., R. 18 E., MDM, Nevada, by Stewart (Govt. Exh. 75), which contains a number of references to rocks inplace as corner monuments and, in one case (page 36), the word "set" is crossed out when referring to a rock inplace. [29] See Govt. Exh. 76; Tr. II 76. The 1900 field notes also refer to setting stones. Thus, it appears that setting a stone is distinguished from using a rock inplace as a corner monument. BLM's witnesses concluded that the original surveyors regarded setting a stone as moving a stone into position.

27/ Appellants attribute the fact that BLM's dimensions for the stone are larger than appellants' to the fact that BLM excavated around the stone before taking a measurement. Indeed, Forsyth testified that Government exhibit 68 was a photograph of him "standing with my hand on the boulder after we dug around the base to see how big the boulder was, to see what the size was" (Tr. 150-51). The 1881 survey instructions require that "dimensions above ground must be given "(Downer's Posthearing Brief at 6; see 1881 Instructions at 32).

28/ In his posthearing brief at 20, Downer stated that "[a]ctually the '1' is about 4" high, and the '4' is about 4" high by 4" wide."

29/ Downer read page 36 as "[s]et a rock inplace" (Tr. 489; see Tr. 491). Government exhibit 76 is a blow-up of that page, which indicates that the word "set" is crossed out.

Downer, on the other hand, testified that setting a stone in the 1881 survey field notes could mean either moving a stone into position or marking a stone (Tr. 472-73). [30] In any case, regardless of how the original surveyors defined setting a stone, we must conclude that the reference in the 1881 survey field notes to setting a stone, weighing over 1,000 pounds, by moving it into position is, in the words of Judge Luoma, "not a reasonable proposition" (Decision at 8). We, therefore, conclude that this was an inplace stone.

The word "set" in the 1881 survey field notes is also printed and the surveyors may simply have failed to correct the error or felt an obligation to strictly conform the notes to the format set forth in the instructions. See Tr. II 34. We find this more plausible than that the surveyors actually meant a smaller stone, as suggested by BLM. However, we cannot find beyond a reasonable doubt that appellants' stone is the stone described in the 1881 survey field notes.

Judge Luoma personally inspected appellants' stone and reports in his September 1985 decision at page 8: "My untrained eyes failed to detect what I could consider to be man-made markings on the Downer

stone." We also have studied the photographs of the stone introduced at the hearing, particularly Government exhibits 64 and 67, and, while we admit that a photograph is not as food as seeing the evidence first hand, we are unable to discern man-made marking on the stone with sufficient certainty to conclude Judge Luoma had erred. We note that Jones had the same difficulty in identifying a 1/4 in the photographs. See Tr. 175-79.

As pointed out by Judge Luoma, there is the "small" probability that the stone fell "directly on line" (Decision at 9). However, that probability exists. Both Downer and Forsyth testified that an inplace stone would have to be extremely close to the line in order to be used as a corner monument (Tr. II 57-79, 112-14). In a limited survey of the area surrounding appellants' stone, however, Downer stated that they did not find another "big embedded stone of that nature" (Tr. II 56-57). Forsyth testified that there were similar embedded stones northwest of appellants' stone, but from 50 to 80 feet away (Tr. II 111-12).

Calls from corners

Appellants argue that their stone is "on line." Appellants note that their 1/4 corner is, respectively, 142 feet long from the record distance

two undisputed corners (Downer's Posthearing Brief at 14). By contrast, BLM's 1/4 corner is, respectively, 173 feet long and 343 feet short of the record distance from these corners. Id. at 13. The bearing on appellants' west line between the southwest and west 1/4 corners is N. 0° 34' 22" W., close to the record bearing of N. 0° 14 E. See Appellants' Exh. 3. The bearing of BLM's west line is N. 0° 39' W. See Govt. Exh. 34.

Proceeding north from the southwest corner of sec. 4, the first call is to a gulch at 38 chains, or 2.35 chains south from the west 1/4 corner. Downer testified that appellants' west 1/4 corner was "up to a half a chain off" the record call, but that the creek "has two beds there" (Tr. 381). According to Downer, "it depends on which one you want to take and which way the cloudbursts scoured it in the last hundred years" (Tr. 381). The field notes of BLM's dependent resurvey indicate that a wash crosses BLM's west line at 38.20 chains. However, the wash

30/ The 1881 Instruction set forth the form of survey notes beginning at page 22 and stated "their work in the field must strictly comply with the same." All notes speak of a stone being "set." The instruction further provided at page 32: "When a rock in place is established for a Corner, its dimensions above ground must be given, and a cross (X) marked at exact Corner point. In other respects form for stone corners will be used."

is described as 20 links wide, draining NNW, as opposed to the 25-link wide gulch, draining NW, described in the 1881 survey field notes. We find the evidence regarding the gulch inconclusive. Downer found "no vestige" of the Bodie telegraph line, i.e., the next call. Id.

The next call beyond the telegraph line is the Bodie road at 43.50 chains, or 3.15 chains north from the west 1/4 corner. As has already been discussed, there is a clear dispute between BLM and appellants on the location of the Bodie road. However, as noted supra, we accept that the travelled way depicted in the 1923 plan (Appellants' Exh. F) is the Bodie road. Sheet No. 7 of the 1923 plan shows the travelled way crossing the west line of traces of the road on the ground "[a]ll through that stretch" (Tr. 468; see Appellants' Exh. T). Downer further testified that the distance from where the road crosses the section line to appellants' 1/4 corner is 3.3 chains (Tr. 387). By contrast, the distance to BLM's 1/4 corner is 6.5 chains[31] (Tr. 387-88). We cannot say that appellants' 1/4 corner is precisely "on line." However, we conclude their the corner is "on line" within an acceptable level of tolerance.[32] By contrast, BLM's quarter corner is definitely not on line.

31/ Page 9 of the field notes of BLM's dependent resurvey (Govt. Exh. 35) states that the distance between BLM's west 1/4 corner and an "[o]ld bladed road" is 3.20 chains. However, we do not accept this road as the Bodie road described in the 1881 survey field notes. In his posthearing brief at page 8, Downer also stated that, near the 1/4 corner, BLM's purported Bodie road has an "adverse grade," whereas the actual Bodie road "maintains a long steady grade along this stretch." The distance from appellants' west 1/4 corner is 2.11 chains (Tr. 326-27).

32/ Appellants also pointed to a series of "line cuts" extending north and south from their southwest corner. See Tr. 379-80; Appellants' Exh. D. However, there is no evidence that these trees were either line trees or blazed trees on or near the line established in the manner prescribed in the 1881 Instructions at page 12.

With respect to appellants' corner monument, Judge Luoma concluded: "If the rock is indeed of the dimensions given in the field notes, and there are no other rocks of its kind in the area, Downer's rock has to be the true monument" (Decision at 9). We agree, with the caveat that there must be more conclusive proof that there is a 1/4 marked on the stone. The record is conclusive proof that there is a 1/4 marked on the stone. The record is simply inconclusive on this latter point. [33] BLM's examination of the stone to date has been merely a visual inspection by cadastral surveyors, with no particular demonstrated expertise in geology or even archaeology. Appellants' stone would need to be subjected to

independent scientific analysis in order to determine whether a 1/4 is chiseled into the face of the stone, or indeed whether the stone bears any man-made markings.

In any case, the location of the west 1/4 corner of sec. 4 has not been determined such that the accuracy of BLM's location of the southwest corner can be verified. To the extent that the evidence supports appellants' west 1/4 corner, the accuracy of BLM's location of the southwest corner is thrown into doubt. The record does not indicate precisely how the west line of sec. 4 between these two corners would differ from the 1881 survey record, if appellants' west 1/4 corner and BLM's southwest corner were accepted. However, a significant deviation would clearly result. See Appellants' Exh. D. Speculation as to this deviation would be premature until BLM has fully investigated appellants' west 1/4 corner in the course of another dependent resurvey. It may be that on reexamination BLM may discover this to be the true original corner monument. At this point, it is sufficient to say that we agree with Judge Luoma that the evidence regarding the west 1/4 corner casts doubt on the accuracy of BLM's location of the southwest corner.

Corner Common to Secs. 4 and 5, T. 11 N., R. 21 E.

Secs. 32 and 33, T. 12 N., R. 21 E.

The southwest corner of sec. 4 is also tied to the northwest corner of that section, with a record distance of 80.35 chains on a bearing of S 0° 14' W. The location of the northwest corner is also disputed by appellants. The monument at this corner is described in the 1881 survey field notes, prepared by Conkling, as a 20x10x8-inch trachyte stone set in a stone mound, 4-1/2 feet in diameter at base and 2 feet high, with two

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33/ BLM also challenged appellants' west 1/4 corner on the basis that no cross (X) was "cut at the exact cornerpoint on the rock" (Brief at 10). BLM cites page 107 of the Survey Manual. That manual provision provides for making a cross (X) "at the exact corner point" in cases "[w]here the corner point falls upon surface rock, preventing excavation" necessary for placement of a stone monument in the ground. Id. The 1881 Instructions at page 32 also require that a cross (X) be marked "at exact Corner point" in cases where "a rock in place is established for a Corner." Appellants' witness testified that they believed there to be a cross (X) marked on top of the rock, but this evidence was also inconclusive.

bearing trees, a 12-inch-diameter pipe 25 links distant on a course of S. 28° W., and a 6-inch-diameter pine 20 links distant on a course of S. 57-3/4° E. (Govt. Exh. 44). This corner was dependently resurveyed by BLM in 1973 (Group No. 496), which located two bearing trees with blazes age dated to 1881 (Tr. 328; Govt. Exh. 35 at 10). The bearing trees are described as a 12-inch-diameter pine 45

links distant on a course of S. 74-1/4° E. and a 12-inch-diameter pine 30 links distant on a course of S. 26-1/2° W. See Govt. Exh. 35 at 10. Judge Luoma noted that the 12-inch-diameter pine in the southeast quadrant is "particularly off" (Decision at 9; see Appellants' Exh. J). [34]

There is no indication whatsoever in the field notes of BLM's dependent resurvey that BLM had found the original stone corner monument. See Govt. Exh. 35 at 10; Govt. Exh. 16 (Sheet 2 of 9). However, at the hearing Bland testified that BLM as a "marked rock" (Tr. 344). In Government exhibit 28 at page 1, Faust reported that BLM's corner consists of a "notched rock (4 notches on one side and 2 notches on the opposite side) in a rock mound." No dimensions for the stone are given. In Government exhibit 26 at page 3, Dickinson stated that BLM's corner was "unsupported by a proper record stone."

Appellants also state that BLM's northwest corner of sec. 4 is 230 feet short of the record distance to the northeast corner of sec. 4, 342 feet short of the distance to the southwest corner of sec. 9 and 182 feet long from the distance to the northwest corner of sec. 33, T. 12 N., R. 21 E., MDM, Nevada, which corners are undisputed (RB-A at 1).

Appellants used the method of single

proportionate measurement to establish the northwest corner of sec. 4, using the north 1/4 corner of sec. 4 and the northwest corner of sec. 5 (Tr. 416-17). These control corners are not the corners accepted by BLM in the 1973 dependent resurvey. See Appellants' Exh. D. The record is not fully adequate to assess the accuracy of appellants' control corners and, thus, is inadequate to assess appellants' placement of the northwest corner of sec. 4. Appellants assert that these control corners match various calls and, in particular, create north lines for secs. 4 and 5 which closely match the various calls and bearings. See Tr. 398-400, 420-25; Tr. II 121-26; Appellants' Exh. KK). BLM disputes appellants' assertion. See Tr. II 81-82.

Nevertheless, as discussed infra, we cannot say in view of the scribed stone and the blazed bearing trees that the northwest corner of sec. 4 is lost, such that resort must be had to the method of proportionate measurement to locate the corner. Rather, we conclude that the corner has

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14/ We also note that the Jones survey described in is corner record (Govt. Exh. 16 (Sheet 2 of 9)) finding three bearing trees, a 4-inch-diameter pine 30-feet distant bearing N. 58° E., a 5-inch-diameter pine 15-feet distant bearing S. 72° E. and a 10-inch-diameter pine 66 feet distant bearing N. 60° W. No explanation is given in the record for the discrepancy between what BLM and the Jones survey found at this section corner.

been found, hand, in his 1913 survey, Reppert reported finding at the corner of secs. 11, 12, 13, and 14 a "quartzite stone 10x10x20 [inches] firmly set in a mound of stone * * * [with] four deep grooves chiseled on the south face and one groove on the East face," as well as a 14-inch-diameter pine bearing tree located 47 links distant on a bearing of N. 70° 32' E. (Appellants' Exh. B at 8). The record stone is described as a quartz stone 16x10x10 inches set in a stone mound. See Govt.Exh. 3. Reppert accepted the stone monument as the original corner (Appellants' exh. B at 13-14). We, likewise, find no "material disagreement" as a result of the way this monument was marked (Survey Manual at 5-7). This evidence indicates that Stewart and Conkling marked their stone monuments with grooves as well as notches. We, therefore, cannot presume that Stewart and Conkling, in setting the southwest corner of sec. 4, complied with the requirement to notch stone monuments used to identify corners common to four sections. We, therefore, attribute no importance to the fact that BLM's stone is not properly notched. [37]

Bearing Trees

The four bearing trees found in the field clearly do not conform to the record. The substance of this

finding can best be illustrated by restating the reference to the bearing trees in the 1881 notes (Govt. Exh. 3) and the resurvey notes (Govt. Exh. 35). The stewart and Conkling survey notes state:

> from which bears, a Pine 12 [inches in diameter] N. 80° W. 19 [links distant], Pine 16 [inches diameter] S. 79° W. 23 [links distant], Pine 10 [inches diameter] S. 54° E. 31 [links distant, and] Pine 8 [inches diameter] S. 62° E. 28 [links distant].

(Govt. Exh. 3). On the other hand, the notes of the 1982 resurvey contain the following statement regarding bearing trees;

> from which the original bearing trees

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fn. 36 (continued)
See Govt. Exh. 49 at 7; Govt. Exh. 50 at 4. This suggests that the stone monuments found by the 1973 dependent resurveys may not have been the original monuments.

37/ We also note that, in is dependent resurvey, BLM found a rebar, 1-inch in diameter, with a cap on top marked "T 11 N R 21 E 4 5 8 9 RLS 3740 1981," next to the stone identified by BLM as the corner monument (Govt. Exh. 35 at 7). This stone had been placed by the Jones survey in 1981. See Govt. Exhs. 15, 16. However, the corner record for this corner prepared in connection with the Jones survey (Govt. Exh. 16 (Sheet 3 of 9)) states that the Jones survey found a "18x14x7 stone, 5 notches on south, 4 notches on east * * * in stone mound." This suggests that BLM's 22x17x9 stone was placed at that site sometime between the time of the Jones survey and the BLM dependent resurvey in 1982, and is either not the original stone or that it was moved to that location. It also calls into question the accuracy of the Jones survey.

> A stump hole, bears N. 18-1/2° E., 23 lks. dist., with an uprooted pinon lying alongside, 6 ins. diam., mkd. BT on open blaze. (Record: S. 62 ° E., 28 lks. dist.)
>
> A stump hole, bears S. 43-3/4° E., 18 lks. dist., with an uprooted pinon lying alongside, 12 ins. diam., mkd. BT on open blaze. (Record: S. 54° E., 31 lks. dist.)--
>
> A stump hole, bears S. 56-3/4° W., 22 lks. dist., with an uprooted pinon lying alongside, 8 ins. diam., mkd. BT on open blaze. (Record: S. 79° W., 23 lks. dist.)
>
> A stump hole, bears N. 50-1/2° W., 14 lks. dist., with an uprooted pinon lying alongside, 8 ins. diam., mkd. BT on open blaze. (Record: N. 80° W., 19 lks. dist.)--

(Govt. Exh. 35, at 7). As stated by Judge Luoma: "Worth noting, however, is the fact that all the trees are considerably (up to 50%) smaller in diameter than the trees in the 1881 field notes. They also do not match the field notes in distance, and are particularly off from the field notes in angles" (Decision at 6). BLM attempts to generally explain the fact that its bearings and distances do not match the original record by the fact that the early

surveyors made their notes based on the recollections of the "cornerman," and the fact that the 1881 surveys covered 700 miles in 2-1/2 months. [38] See Tr. 158-59; Tr. II 119.

We note that the 1881 Instructions at page 44 provide that these notes "must always be written down on the spot, leaving nothing to be supplied by memory." We must presume that Stewart and Conkling complied with this procedure. This is not to suggest that inaccuracies did not occur in the 1881 survey field notes in describing bearings and distances. See Tr. 240-1; Alfred Steinhauer, 1 IBLA 167, 172-73 (1970). The diameters of bearing trees may also have been misdescribed in original surveys. Elmer A. Swan, 77 IBLA 99, 101 (1983). In Stoddad Jacobsen, supra at 340, we described the discrepancies with respect to the southwest corner of sec. 4 as "considerable." We now conclude, in accordance with the Survey Manual at 5-7, that the nature of the accessories is "greatly at variance with the record." In particular, BLM places a bearing tree in the northeast

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38/ The 1881 survey field notes (Govt. Exh. 3) indicate that the surveyors covered 8 section lines, including the south and west lines of sec. 4, as well as set the south and west 1/4 and southwest corners of sec. 4 on Aug. 25, 1881. This suggests a certain amount of haste. There is no evidence as to how the original field notes were taken.

quadrant, where the 1881 survey field notes clearly do not call for a bearing tree in that quadrant. See Appellants' Exh. K. However, the evidence also establishes that the trees were blazed as bearing trees and that two of the blazes were made in 1881. The evidence indicates that one of the tree died in 1927. Forsyth testified that "one part of the stump or root system [of the southwest tree] was still stuck in the ground" (Tr. II 106). Appellants argue that either the bearing trees were moved to the area of BLM's southwest corner, or the trees were blazed on site, in an effort to create a fraudulent corner.

Appellants have also placed BLM's southwest corner in relation to other corners, vis., the southeast corner of sec. 4, the southwest corner of sec. 9, the south quarter corner of sec. 5, and the northwest corner of sec. 33, T. 12 N., R. 21 E., MDM, Nevada. The record distances to these other corners are, respectively, 79.72, 80, 39.9 and 160.35 chains, whereas the distances from BLM's southwest corner of sec. 4 are, respectively, 76.92, 74.9, 43.75 and 162.85 chains (RB-A at 2; RB-B at 2). Appellants conclude that the southwest corner of sec. 4 is "on average 207 ft. east and 274 feet. south of its recorded position. * * * The diagonal distance moved

is southeast 343 ft." (RB-A at 2). Judge Luoma particularly found "most disturbing" the fact that BLM's resurvey was in "complete nonconformity to the record calls" (Decision at 12).

Appellants' placement of the corner

Appellants determined the southwest corner of sec. 4 to be lost because the corner monument discovered by BLM did not match the bearing trees or the various calls found in the 1881 survey notes and reestablished the corner by the method of double proportionate measurement. See Tr. 361-63; Tr. II 53-55. The control corners used by appellants were the south 1/4 corner of sec. 4, the south 1/4 corner of sec. 5, the southwest corner of sec. 9, and the west 1/4 corner of sec. 4. See Tr. 365-66. The northern and eastern control corners were originally the southeast corner of sec. 4 and the northwest corner of sec. 33, T. 12 N., R. 21 E., MDM, Nevada. Id. Appellants state that the distance between the southeast and southwest corners of sec. 4 along their section line is about 80.04 chains, whereas the record distance is 79.72 chains (RB-B at 4). We also note that the bearing between the south 1/4 and southwest corners of sec.4 on appellants' exhibit D is S. 88° 56' 43" W., which also almost matches.

Downer tendered additional evidence regarding the course of the line between secs. 4 and 9 and

between 8 and 17. Certain of this evidence is worthy of note, as its existence is not refuted by BLM. Downer found a series of line blazes between sec. 4 and 9 which were age-dated as having been made in 1881 (Tr. 369-70). Downer claimed that these "line cuts" could be followed for "hundreds of feet" (Tr. 511). BLM discounted these blazes because "there is no such description of any line trees in Exhibit 3, which is the 1881 field notes." Line trees were to be noted in the field notes. However, a line tree was described in the 1855 Instructions as follows:

> 6. All lines on which are to be established the legal corner boundaries are to be marked after this method, viz: Those trees which may intercept our line must have two chaps or notches cut on each side of them without any other marks whatever. These are called "sight trees," "line trees," or "station trees." [Emphasis in original.]

Id. at 4. This section further states:

> A sufficient number of other trees standing nearest to your line, on either side of it, are to be blazed on two sides diagonally, or quartering towards the line, in order to render the line conspicuous, and readily to be traced, the blazes to be opposite each other,

> coinciding in direction with the line where the trees stand very near it, and to approach nearer each other the further the line passes from the blazed trees. Due care must ever be taken to have the lines so well marked as to be readily followed. [Emphasis in original.]

Id. As can be seen, the surveyor was required to blaze trees on each side of the line, but was not required to note the blazes unless the tree fell on line.

Downer also submitted evidence that, with the placement of the corner as proposed by BLM, a number of ties to natural monuments are consistently off by approximately three chains (Posthearing Brief at 15).

After weighing all of the evidence presented by BLM in support of the location of the corner common to secs. 4, 5, 8, and 9, T. 11 N., R. 21 E., MDM, Nevada, including the evidence as to the location of the boundary between secs. 4 and 9, we find the evidence that the monument identified by BLM as the monument for that corner does not establish beyond a reasonable doubt that the monument represents the position of the corner set in the 1881 survey. Having this doubt, we cannot hold this corner to be a "found" corner. While the character and dimensions of the monument are sufficiently close to the stone described in the 1881 field notes, the stone is

small enough to have been moved. None of the bearing trees found by BLM agree with the BLM notes in bering, distance from the corner, or size. The location of the corner and calls on the line from the corner to the SE corner of sec. 9 have wide discrepancies, and there is overwhelming evidence of the existence of multiple monuments in the general area.

We also cannot find the BLM corner to be "obliterated" as the corner is not supported by its relationship to known corners, the field notes, or indisputable collateral evidence.

In his September 1985 decision, Judge Luoma did not accept appellants' "double corners" theory. Appellants' argument in favor of double corners is premised first on the fact that they have discovered double sets of corners along the north township line, particularly at the northwest and north 1/4 corners of sec. 4 and the northwest corner of sec. 5. See Tr. 397-400, 418, 420-22; Tr. II 128-29; Appellants' Exh. D. However, there

appears to be no uniform displacement of these corners which would suggest that the entire north township line was shifted in order to achieve closure at the northwest township corner. See Appellants' Exh. D.

In addition, appellants have not fully authenticated any of the monuments accepted by them at these corners as the original monuments. [39] Indeed, appellants have abandoned the monument at the northwest corner of sec. 4 in favor of a corner determined by the method of single proportionate measurement. See Appellants' Exh. D; RB-A at 8.

In this respect, appellants' evidence is based on the existence of multiple monuments (an undisputed fact) and the fact that appellants' north township line purportedly "better" meets the calls in the 1881 survey field notes (RB-B at 3). This evidence is not sufficiently developed to reach any conclusion. See Appellants' Exh. L at 608. Appellants next rely on the fact that nine corners in secs. 4 and 5 accepted by BLM all fail to match record calls to certain undisputed corners in the same direction by "about 300 [feet]" (RB-A at 9). In his posthearing brief at page 13, Downer stated that the "average difference [was] 241 feet." In fact, the difference ranges between 165 and 361 feet. Id. Again, we cannot say that there has been a uniform shift in all of these various corners in order to achieve closure at the northwest township corner. However, it remains possible that such an attempt was made.

Summary of findings and resulting effect on resurvey

One of BLM's primary objections to Judge Luoma's decision was that Judge Luoma failed to give sufficient guidance on how to conduct another resurvey. We recognize and understand the basis for its objection even though it has no bearing on the accuracy of Judge Luoma's findings. However, we also understand Judge Luoma's reluctance to tell BLM how to do its job. In an attempt to avoid both traps, we will summarize the findings in a manner intended to give guidance to BLM for the conduct of the contemplated resurvey. In doing so we will again retrace the 1982 resurvey route.

The resurvey commenced at the monument determined to be the original monument common to secs. 9, 10, 15 and 16, T. 11 N., R 21 E., MDM, Nevada. The placement of this monument was accepted by all parties and there is no evidence to refute the placement of this corner. The placement of this corner is deemed acceptable.

The survey proceeded in a northerly direction and the 1/4 corner common to secs. 9 and 10 was remonumented, based on evidence found in the field. We also deem this corner placement to be acceptable.

The corner common to secs. 3, 4, 9, and 10 was remonumented based upon evidence that a monument found was a "careful and faithful perpetuation of the original corner"(Govt.Exh.35 at 3). No evidence

was tendered by either

39/ The same test would apply to any corner appellant claims to have been "found." A reasonable doubt remains as to these corners, as well.

appellants or BLM to refute this finding and we conclude the determination to be correct. The placement of this corner was made in the orderly course of the resurvey. To now say that this corner should be moved to straighten the dogleg in BLM's placement of the boundary between sections 4 and 9 without any consideration of the physical evidence, including but not limited to calls to natural and man-made monuments, violates the stated purpose of a resurvey. See, Survey Manual at 6-4. Judge Luoma reconstructive surgery necessary. On appeal, counsel for BLM has proposed a band-aid.

Finding no evidence of the location of the monument for the 1/4 corner common to secs. 3 and 4, the corner was established at a proportionate distance from the NE corner, sec. 4 and the SE corner, sec. 4. The placement of this corner was not disputed and no evidence has been proposed to lead us to conclude that this 1/4 corner was not properly set.

The resurvey then continued on a westerly course from the corner common to secs. 3, 4, 9, and 10. A 1/16 corner was set at a point equidistant from the SE corner, sec. 4 and the 1/4 corner common to secs. 4 and 9. For reasons discussed immediately below, we find this 1/16 corner to have been improperly placed.

This resurvey continued to the 1/4 corner common to secs. 4 and 9, which was determined by BLM to have been found. However, based upon our review of the evidence presented to Judge Luoma, we also find there to be sufficient conflicting evidence to conclude that a reasonable doubt exists as to the location of the corner at the position stated in the resurvey notes. There being a reasonable doubt, the 1/4 corner described in the resurvey notes and monumented by BLM cannot be considered to have been found, and the monument described cannot be deemed a faithful perpetuation of the original corner. We find no error in Judge Luoma's conclusion.

The west 1/16 corner common to secs. 4 and 9 also was established by proportionate measurement between the 1/4 corner and the corner common to secs. 4, 5, 8, and 9. Similarly, placement of the monument on resurvey is not acceptable.

The corner common to secs. 4, 5, 8, and 9 was determined to have been found. Again, a reasonable doubt exists as to the authenticity of the evidence relied upon in the placement of this corner. It cannot be considered to be a found corner at the place designated in the resurvey or a faithful perpetuation of the original corner. We find no error in Judge Luoma's conclusion.

The survey then proceeded in a northerly direction from the corner common to secs. 4, 5, 8, and 9. The southerly 1/16 corner common to secs. 4 and 5 was placed by proportionate measurement. Again, the placement is not acceptable.

The 1/4 corner common to secs. 4 and 5 was determined to have been found. Again, a reasonable doubt exists as to the authenticity of the evidence used by BLM in the placement of this 1/4 corner. It cannot be

considered to have been found, and cannot be considered to be a faithful perpetuation of the original corner. We find no error in Judge Luoma's conclusion.

Appellants have tendered evidence as to the location of the 1/4 corner common to secs. 4 and 9, and the 1/4 corner common to secs. 4 and 5. We also find that a reasonable doubt exists as to the evidence in support of those corners. Generally speaking, however, the placement of the boundary between secs. 4 and 9 more closely matches that described by appellants. The calls more closely agree and the distances between the corners more closely match the boundary placement they propose.

We are troubled by the apparent inconsistency of BLM's position. For example, of the evidence for

the corner common to secs. 4, 5, 8, and 9, only the stone matched. All other evidence was at great variance. The corner was accepted because of the stone. The variances were explained away as sloppy surveying. At another point, the stone was nowhere near that described in the 1881 survey, but accepted, on the basis of there being a sloppy and rushed survey. Evidence of line blazes was discounted because the notes did not make reference to line blazes. At other times BLM took a stance that the survey notes were reconstructed from memory and were not accurate. [40] Appellants' evidence generally supports the accuracy of the 1881 survey. The evidence of discrepancies presented by BLM almost makes a case for a fraudulent survey. The option of conducting an independent resurvey remains open to BLM, and should be considered.

40/ The ability to discount the mass of evidence which tends to disprove BLM's placement of the various corners is not unique to BLM. The dissenting opinion has either elected to ignore this evidence or to blame it on the inaccuracies of the original survey. In doing so, he also has ignored one additional factor crucial to our review of this case. A hearing was held, during which four days of testimony was presented. and over 200 exhibits were identified and admitted. Judge Luoma made a personal examination of the site, including the corners and other physical features. Yet, the dissent has not shown error in his findings, or found it necessary to do so. We recognize that there is no evidence presented by the appellants that, standing alone, would be considered to be "probative," and cause us to come to a conclusion regarding the proper outcome of this case. However, the very argument used by BLM throughout the hearing and on appeal is one of the most probative elements in this case. BLM

argues that "inaccuracies were* * * endemic to the system" when describing the original survey. If the errors were so pervasive to be endemic, that fact alone would render any and all evidence regarding the corners suspect, not just that evidence which did not happen to fit BLM's case before Judge Luoma. If we are to accept the argument that there are "endemic" inaccuracies in the original survey, the fact that these errors are endemic should increase the burden necessary to establish the corner as being the one set at the time of resurvey, rather than decreasing it. If any part of the survey is suspect, it all must be. Otherwise, on resurvey, the tendency will be to pick and choose the evidence in an attempt to justify some result, rather than carefully and independently weighing the evidence.

If a dependent resurvey is made, the possibility that a double set of corners was established along the northern township boundary of T. 11 N., R 21 E., during the course of a subsequent survey in T. 12 N., R 21 E., should be addressed. The change in course of this boundary as depicted in the resurvey of T. 12 N., R. 21 E., but not depicted in the survey of T. 11 N., R. 21 E., is of concern. Any adjustment to the size of the sections in T. 11 N., R. 21 E., should have been made in the northerly tier of sections, thus making sec. 9 a full 640-acre section. If proportionate measurement is used to set the corner common to secs. 4, 5, 8, and 9, care should be exercised to determine if the corner can be more readily determined using reliable topographic calls or other evidence set forth in the 1881 field notes, rather than the corner common to secs. 4 and 5, T. 11

N., R. 21 E., and sec.s 32 and 33, T. 12 N., R. 21 E., which was reestablished in the 1973 resurvey of T. 12 N., R. 21 E. See Survey Manual at 5-16.

In conclusion, we find Judge Luoma's decision fully supported by the facts. A further resurvey was properly ordered. In conducting the further resurvey, BLM shall have the latitude of determining whether this resurvey should be dependent or independent. It shall have the additional latitude of conducting further research regarding the location of the corners described in the 1881 survey. In conducting the resurvey, all evidence noted should be described, including that evidence ultimately rejected. For the rejected, as well as the accepted evidence, a detailed statement of the reason for rejection or acceptance should be set forth in the survey notes. The boundaries of the property of the various parties should be further investigated to determine if, and to what extent these parties may have relied on the boundaries of the 1881 survey (Survey Manual at 5-10). In addition, the holdings of this Board with respect to the "monuments" found by BLM during the conduct of the previous resurvey should be followed unless and until additional supporting evidence of such a nature as to identify the corners beyond a reasonable doubt is found.

Therefore, pursuant to the authority delegated

to the Board of Land Appeals by the Secretary of th
Interior, 43 CFR 4.1, the decision appealed from i
affirmed as clarified by this decision and the cas
is remanded to BLM for further action consisten
herewith.

s/ R. W. Mullen
R. W. Mullen
Administrative Judge

I concur:
/s/ Gail M. Frazier
Gail M. Frazier
Administrative Judge

97 IBLA 220

IBLA 86-4

CHIEF ADMINISTRATIVE JUDGE HORTON DISSENTING:

In an attempt to resolve the actual location o
the boundary between secs. 4 and 9 of township 11
the evidentiary hearing in this case concentrated o
the Bureau of Land Management's (BLM) placement o
two section corners, viz., the southwest corner o
sec. 4 and the northwest corner of sec. 4, and tw
quarter section corners, viz., the quarter corne
common to secs. 4 and 9 and the quarter corne
common to secs. 4 and 5.

BLM's 1982 dependent resurvey contains stron
and convincing on-the-ground evidence that th
disputed section corners are "found" corners. It
evidence of the quarter section corners is les
strong, but under all the circumstances of thi

case, it is my view that only a narrow remand of this matter to BLM is necessary to bring this case to a proper conclusion.

Appellants Jacobsen and Downer challenge the accuracy of the resurvey on the theory that at or about the time of the filing of the 1881 cadastral survey, a system of double corners was created. Specifically, they allege that various corner monuments were fraudulently moved by the original surveyors or others so that the 1881 survey would properly close, thereby entitling the surveyors to be paid for their work (Jacobsen and Downer Posthearing Brief at 1-2). Jacobsen and Downer in fact "acknowledge that in order for this honorable court to determine this matter in their favor, that they must prevail with respect to their contention of the 'double set of corners theory.'" Id. at 12.

The Administrative Law Judge determined the evidence did not support the double-corners theory. That finding should be affirmed. That double corners were employed by the original surveyors or others acting in the same time frame as the original surveyors is partly surmised by Jacobsen and Downer on the basis of notes made by H. W. Reppert, a United States transit man under contract with the United States in 1913, who performed a retracement of several subdivisional lines of township 11, outlining secs.

10, 11, 12, 13, 14, and 15. Reppert's notes opined that double corners were created at the time of the 1881 survey (Hearing Exh. B).[1] Reppert's notes also concluded, however, that overall the 1881 survey was conducted accurately (Exh. B at 10-11; Jacobsen and Downer Posthearing Brief at 4).

Responding to the double-corners theory generally and the Reppert notes in particular, BLM states:

> The only evidence concerning the possible location of double corners within this Township is contained in appellants'
>
> Exhibit B.

1/ At the hearing, exhibits of Jacobsen and Downer, appellants in the proceeding, were identified by letters; exhibits of the Government, respondent below, were identified by numbers. As all parties to the hearing have appealed from the Administrative Law Judge's decision, they are identified here by name.

> Exhibit B demonstrates that, if double corners were found at all, they were found at a point in the Township southeasterly of the points at issue in this appeal. Repert [sic] did not purport to find double corners at any of the locations at issue herein. Furthermore, an examination of Exhibit B indicates that the "undocumented corners" which Repert [sic] found were represented by wooden posts (pine stakes) with no supporting bearing trees (Exhibit B, p.

10 and 11). None of the survey points supported by either party are so marked.

> Appellants, in fact, don't claim to have found double corners at either the southwest or the northwest corner of Section 4. In fact, they originally double proportioned the location of the southwest corner of Section 4 (TR. 362) and single proportioned the northwest corner of Section 4 (TR. 366, 395) because of a lack of any physical evidence on the ground.

(BLM Posthearing Brief at 2).

BLM also takes issue with the Administrative Law Judge's characterization that the Reppert retracement encountered "many spurious corners in the area" (Decision at 2). In its appeal brief, BLM states at page 5:

> In fact, an examination of Exhibit B reflects that this statement is patently not correct. Reppert states that he encountered only two spurious corners in his retracements. These were the quarter section corner of Sections 11 and 14, and the corner of Sections 11, 12, 13 and 14 (Exhibit B page 17), which he states were set by local surveyors (Exhibit B, page 11). These alleged double corners are both more than a mile from the corners at issue in this proceeding.

BLM's observations about the double-corners theory are well taken. Moreover, the most compelling evidence against the double-corners theory is the

persuasive showing that single corner monumentation was found by the resurvey on the ground in accordance with the 1881 survey notes.

As previously stated, the two section corners at issue in this case are the southwest corner of sec. 4 and the northwest corner of sec. 4. The southwest corner of sec. 4 is described in the 1881 field notes as follows:

> Set trachyte stone 24x18x12, in stone mound 4 1/2 feet in diameter at base, by 2 feet in height * * * from which bears a Pine 12 (inches in diameter) N. 80°W. 19 (links distant), Pine 16 (inches diameter) S. 79°W. 23 (links distance), Pine 10 (inches diameter) S. 54° E. 31 (links distant, and) Pine 8 (inches diameter) S. 62° E. 28 (links distant).

Downer, a land surveyor and civil engineer who has conducted several surveys in the subject area on behalf of Jacobsen, located no stone, mound, or trees in the vicinity of the 1881 location of the southwest corner of sec. 4 that fit with his survey lines. He restored what he believed was a lost corner by the double proportionate method of surveying.

BLM's 1982 resurvey purports to have found the

true southwest corner of sec. 4 and the preponderance of the evidence leads to this conclusion. [2] A trachyte stone measuring 22x17x9 was found with markings along with a wood post and rebar set there as part of a private survey conducted in 1980 (the Jones survey). Four uprooted bearing trees were found. The blazes on two of these trees were age-dated by the University of Arizona and were found to have been made in 1881. Jacobsen and Downer aver that all of the bearing trees in the southwest corner of sec. 4 were moved in 1881, having been dragged therefrom someplace else (Tr. II 26-28, Tr. 514). Apart from the fact that no evidence whatsoever was introduced to substantiate this claim, the findings of the University of Arizona Laboratory of Tree-Ring Research showed that two of the trees were living specimens well into the 20th century (Hearing Exh. 29). [1] As explained by BLM, the evidence shows that the above corner was also found by the Nevada State Highway Department in 1939, in addition to the disputed quarter corner common to secs. 4 and 9, discussed infra (BLM Appeal brief at 5-6). From the record

2/ The majority opinion misstates the legal standard for determining whether a corner has been found. After discussing the evidence concerning the southwest corner of sec. 4, it stats: "[W]e find the evidence that the monument identified by BLM as the monument for that corner does not establish beyond a reasonable doubt that the monument represents the position of the corner set in the 1881 survey" (Opinion at 216).

To determine that a corner is found does not require evidence "beyond a reasonable doubt," terminology used in the 1973 Survey Manual to help define obliterated or lost corners (see sections 5-9 and 5-20). Instead, an existent corner is defined at section 5-5 as "one whose position can be identified by verifying the evidence of the monument or its accessories, by reference to the description in the field notes, or located by an acceptable supplemental survey record, some physical evidence, or testimony." Consistent with this definition of an existent or known corner, it is said: "If there is some acceptable evidence of the original location of the corner, that position will be employed." (Emphasis added.) Restoration of Lost or Obliterated Corners and Subdivision of Sections, (1974 ed.) at 10. See also Clark on Surveying and Boundaries (3rd ed. 1959) at 365.

3/ In addition, Neil R.Forsythe, who was in charge of the dependent resurvey, testified that "part of the stump or root system [of the southwest bearing tree] was still stuck in the ground" (Tr. II 106). Based on this and the general positioning of the trees,Forsythe was convinced that the bearing trees had "grown there." Id. The majority merely takes note of Forsythe's testimony (Opinion at 213). As it was unrebutted, the proper legal course would be to accept Forsythe's testimony over the claim that the trees had been moved to where they were found. Indeed, Judge Luoma properly concluded that "it is unpersuasive to suggest someone physically moved [the bearing] trees" (Decision at 6). Under section 5-5 of the 1973 Survey Manual, bearing trees are on a par with monuments in locating an existent corner. See Elmer A. Swan, 77 IBLA 99, 103 (1983). Even

accepting the majority's "beyond a reasonable doubt" standard for identifying a corner as found (see n.2, supra., such a standard must be deemed met for the southwest corner of sec. 4 by virtue of BLM's bearing tree evidence alone.

as a whole and in light of the strong, physical evidence discovered by BLM, the majority errs in not determining that the southwest corner of sec. 4 as monumented by the 1881 survey was properly found by the 1982 dependent resurvey.

The Administrative Law Judge's decision does not set forth a definitive ruling on the accuracy or lack thereof of BLM's location of the northwest corner of sec. 4. BLM submits that this is a found corner as "supported by a scribed rock and bearing trees whose blaze marks were age-dated and found to have been made at the time of the 1881 original survey (Tr. 366, 395-6)" (BLM Posthearing Brief at 8). The majority concludes that in view of the scribed stone and the blazed bearing trees, it cannot be said that this corner is lost. Indeed, the majority concludes "that the corner has been found, regardless of any discrepancies in record calls to known corners" (Opinion at 210). I would agree.

It having been established that the two disputed section corners are where BLM maintains, BLM's final decision on the protest to its dependent resurvey

provides an apt assessment of the effect thereof: "The SW. and NW. corners of section 4 are definitely fixed by the original corner evidence. Therefore, the relationship of these corners to corners of surrounding sections to the north, south and west are irrelevant, and beyond the scope of the assigned resurveys under this project" (BLM's July 5, 1984, decision at 4).

Jacobsen and Downer challenge BLM's location of the quarter corner common to secs. 4 and 9, maintaining that their own survey shows a different location that closely matches the calls recorded in the 1881 survey notes. The evidence adduced on this issue is considerable and is discussed in detail by the majority.

Although BLM was unable to find the original monument for this quarter corner, in my view neither the majority opinion nor the Administrative Law Judge's decision attributes proper weight to certain extrinsic evidence of record, including a 1939 map prepared by the Nevada State Highway Department which shows the subject corner had been "found" (Hearing Exh. 6D). Two highway monuments were set based on the found corner. The record also shows that conveyances of land were made on the basis of the quarter corner found by the Highway Department in 1939 and its earlier discoveries of the corner in

the same location made in 1917 and 1919 (Hearing Exhs. 5, 7, and 8; BLM Appeal Brief at 3,6). The location of the corner as made by the Highway Department in 1917, 1919, and 1939 coincides with the place of discovery by the 1980 Jones survey of a rock mound which the surveyor and BLM submit was made to remonument the original corner (TR. 227-233; BLM Posthearing Brief at 4).

The majority states the "bona fide character" of the State Highway Department's location of the quarter corner cannot be tested and that it is not supported by other collateral evidence showing a "proper relation to

know corners." In regard to the latter, the majority emphasizes that the bearing between the southeast corner of sec. 4 as set forth in the dependent resurvey and BLM's location of the quarter corner results in a 5-degree deflection of the connecting line. This fact was also influential in the Administrative Law Judge's decision ordering a resurvey (Decision at 12-13). It cannot be said, however, that the quarter corner common to secs. 4 and 9 as recorded by the resurvey does not bear a proper relation to the southwest corner of sec. 4, previously shown to be a found corner. BLM's 1984

decision denying the protest to the resurvey explained, based on a comparison of topography calls and bearings and distances, that: "It is apparent this [quarter] corner was stubbed-out easterly from the cor. of secs. 4, 5, 8 and 9 [southwest corner of sec. 4], as proposed in the original field notes" (Decision at 5).

BLM does not deny the 5-degree deflection in the south line of sec. 4 occurring between the quarter corner and the southeast corner. Instead, it offers a plausible explanation for this deviation and a solution:

> Judge Luoma appears to give great significance to the fact that the location of BLM's south quarter corner of Section 4 creates a 5° bend in BLM's south section line. In its survey BLM accepted the corner of Sections 3, 4, 9 and 10, which in fact resulted in the 5° deflection described in Judge Luoma's opinion. At the corner of Sections 3, 4, 9 and 10, BLM did not find any evidence of the original corner monument or bearing trees, and accepted a monument established by Mr. Jones in his survey of 1980 (TR. 275-6, 365). In fact, Forsythe testified "We did not find the corner of 3, 4, 9 and 10. We accepted evidence that was used by other people. We felt that that was not the corner but we couldn't prove it so we accepted that . . . ." (TR. 276).
>
> On a re-survey, BLM would consider re-establishing the corner of Sections

3, 4, 9 and 10 by the double proportionate measurement, rather than accepting the corner as re-established by Jones. Using Reppert's retracement data (Exhibit B) and the 1982 BLM survey data, and providing that no intervening corners could be found, the proportionate position for the corner of Sections 3, 4, 9 and 10 would be about 0.75 chains south and 2.60 chains east of the accepted corner position. The approximate bearings and distances between the corners would be as follows:

1. The north 1/2-mile between Sections 9 and 10 - north 2° 17' east, 39.35 chains.

2. Between Sections 3 and 4 - north 2° 3' west, 78.56 chains.

3. East 1/2-mile between Sections 4 and 9 - south 86° 13' west, 39.75 chains.

4. The tie from the corner of Sections 1, 2, 11 and 12 to the corner of Sections 3, 4, 9 and 10 - 89° 04' west, 158.83 chains.

Re-establishing the corner of Sections 3, 4, 9 and 10 by this method would reduce the five degree deflection in the bearing t the quarter section corner of Sections 4 and 9 and result in the distance of the east 1/2-mile between 4 and 9 being nearly that of record. The tunnel would then be on the section line instead of one chain north as the 1881 record states.

> * * * A new survey by BLM as ordered by Judge Luoma would double proportion the southeast corner of Section 4 in the manner described, but would not change the location of the corners at issue in this appeal.

(BLM Appeal Brief at 3-5).

The above proposal is reasonable and should be followed. The alternative sought by Jacobsen and Downer, acceptance of their line as more nearly approximating the calls, bearings, and distances described in the original survey, is not reasonable. Even the majority is unpersuaded by much of the evidence submitted by Jacobsen and Downer regarding their location of the quarter corner. See discussion of related calls to a quartz ledge, top of a ridge, tunnel, and gulch crossing. On the other hand, the majority is favorably impressed by evidence submitted by Jacobsen and Downer showing two blazed trees near their south line. Such evidence is not very probative in my opinion and, as the majority allows, there is "no mention of line trees in the 1881 survey field notes." It also appears that one of the alleged line trees was age-dated to earlier than 1881 (BLM's July 5, 1984, decision at 11).

The parties each have intricate versions of how their respective location of the quarter corner best matches the original survey call to "Carter's

Station" or "Carer's House" and the Bodie road. The majority ultimately concludes that BLM's quarter corner does not match the calls to these sites but that the quarter corner location posed by Jacobsen and Downer does. As stated by BLM, there are many explanations which may be given for discrepancies between the notes of the 1881 original survey and what actually appears on the ground. Referring to testimony as to how the survey of 1881 surveyed 70 miles of line in 7 days and how other old surveyors were able to keep up such a pace, BLM states that "inaccuracies in the descriptions of monuments or bearings were endemic to the system" (BLM Appeal Brief at 6). [4] Since BLM has requested the opportunity to reduce the deflection in the south line of sec. 4 by reestablishing the southeast corner of the section, definitive rulings by he Board on those isolated calls is unnecessary.

4/ Hearing Exhs. 49, 50 and 51 compare the information found on the ground with the old surveyor's notes for township 11 and two adjacent townships surveyed by Stewart and Conkling under the same 1881 contract. Inaccuracies in the descriptions of sizes of monuments, bearings, and distances are prevalent throughout all three townships.

The fourth, disputed corner at issue in this case is the quarter corner common to secs. 4 and 5. Both sides claim to have found the original corner

monument as summarized in the majority opinion. The majority declines to rule that the monument stone found by Jacobsen and Downer is the true monument absent "conclusive proof that there is a 1/4 marked on the stone," a fact very much in contention. Essentially, the majority's position is no different than where the Board was 2 years ago when we were "troubled by the apparent fact that the monument accepted by BLM does not approximate, either in composition or size, the stone denoted in the 1881 survey, while appellants' stone apparently does." Stoddard Jacobsen, 85 IBLA 335, 341 (1985). In my judgment, after a full and complete evidentiary hearing in this case, Jacobsen and Downer have failed to prove by a preponderance of the evidence that BLM's identification of the original corner monument is not correct. [5]

We are however much further along than when we remanded this case for a hearing in 1985. In our previous decision, we were of the opinion that the northwest corner of sec. 4 had not been established. Based on the present record, the majority properly concludes that BLM's resurvey found the original corner monument. This is a significant conclusion which, in tandem with the found southwest corner of the section, renders it unnecessary to prolong the debate over whether cuts in the stone found by Downer

were manmade or if they resemble a "1/4" marking. BLM's quarter

5/ The relevant evidence is summarized by BLM as follows:

"Evidence as to the location of the west quarter corner of Section 4 conflicts so greatly that the court was asked to go to the scene and view the evidence itself. Appellants [Jacobsen and Downer] assert that the west quarter corner of Section 4 is monumented by a stone in place, having dimensions above the ground similar to those called for by the field notes of the 1881 survey (exh. 3). BLM's corner consists of a granite stone substantially smaller, but clearly marked with a 1/4 in the west face of the stone (Exh. 54). The 1881 field notes state that the west quarter corner of Section 4 was set, as opposed to being identified as a rock in place. BLM vigorously disputes the fact that appellants' stone is marked at all, hence the reason for the court's visit.

"Neither surveyors Forsythe nor Neitz were willing to accept Mr.Downer's newly discovered in-place monument. Likewise, Mr. Eugene Faust, a cartographer for the State of Nevada, testified that, having had occasion to examine section corners of various kinds for more than 35 years, he would clearly accept BLM's monument, but did not feel that appellants' monument was correct (Tr. 293-4). BLM's Chief of Cadastral Survey, Reno, Nevada, Lacel Bland, after having examined both Mr. Downer's rock in place and the stone depicted in Exhibit 54 [BLM's stone] concluded that there was no way to determine the age of the marks on Exhibit 54, but pointed out that the cadastral surveyors stopped marking corners by scribing stones in 1910 (Tr. 329). He, too, supports the location reestablished by the Jones survey which is identical with the position of the corner as shown on the 1939 highway right-of-way map. (Exh. 6)." (Emphasis in original.)

corner common to secs. 4 and 5 was deemed by the resurvey as lying in proper relation to the section corners one-half mile to the south and north. Since the proper decision in this case is to affirm BLM's location of these section corners, its placement of

the quarter corner on line with these locations should also be affirmed.

Jacobsen and Downer have developed a massive record seeking to show substantial error in BLM's resurvey. With limited exception, their evidence relies on differences in distance and bearing to calls recorded in the original survey. They acknowledge that the efficacy of their case hinges on acceptance of the theory that double corners were fraudulently established at the time of the original survey. As earlier explained, the double-corners theory does not hold up. Moreover, the Board has recognized that on-the-ground evidence of corners is entitled to greater weight than discovered variances in record calls. Robert J. Wickenden, 73 IBLA 394 (1983). As stated in United Stats v. Weyerhaeuser Co., 392 F.2d 448, 451 (9th Cir. 1967), the wisdom of centuries of land law recognizes "that lines marked on the ground by monuments stand highest in the determination of the true boundaries of conveyed land, ranking above statements of directions, distances, or area * * *."

The large scale resurvey ordered by the majority is unwarranted and would undoubtedly result in these same parties appearing before us again debating the same or cumulative evidence. Jacobsen and Downer have not proved by a preponderance of the evidence

that the 1982 dependent resurvey is erroneous such that a complete resurvey should be held. On the other hand, BLM is amendable to reestablishing the southeast corner of sec. 4, which the record cannot be fabricated to show is a properly remonumented corner if, in fact and in law, it is not. See United States v. Williamson, 45 IBLA 264, 276 (198). The procedure suggested by BLM should be ordered by the Board pursuant to its de novo review authority so as to reduce the deflection in the south line of sec. 4.

/s/ Philip Horton
Wm. Philip Horton
Chief Administrative Judge

97 IBLA 228

UNITED STATES DEPARTMENT OF THE INTERIOR

OFFICE OF HEARING AND APPEALS
HEARINGS DIVISION
2020 Hurley Way, Suite 170
Sacramento, California 95825

September 27, 1985

STODDARD JACOBSEN and ROBERT C. DOWNER, Appellants v. BUREAU OF LAND MANAGEMENT, Respondent	: IBLA 84-762 : : DEPENDENT RESURVEY : : Appeal From State Director's Decision dated July 5, 1984, Nevada

DECISION

Appearances: Peter L. Knight, Esq., Minden, Nevada, for appellant Jacobsen; John P. Davis, Esq., Minden, Nevada, for appellant Jacobsen; Thomas J. Ray, Esq., Carson City, Nevada, for appellant Downer; Burton J. Stanley, Esq., U.S. Department of the Interior, Office of the Solicitor, Sacramento, California, for respondent.

Before: Administrative Law Judge Luoma

By decision dated March 22, 1985, (85 IBLA 335), the Interior Board of Land Appeals (IBLA) referred this matter to the Hearings Division for a hearing and decision.

The issue for determination is the validity of a dependent resurvey conducted by the Bureau of Land Management (BLM) of the subdivisional lines between Sections 3 and 4, 4 and 5, 4 and 9, and 9 and 10, Township 11 North, Range 21 East, Mount Diablo Meridian, Nevada. The main issue of contention is the location of the South line of Section 4 as determined by BLM.

In its decision, IBLA ruled that:

> Appellants will have the burden of proving by a preponderance of the evidence that the lines and corners as determined by BLM in its 1982 dependent resurvey, do not depict the original survey lines (1881).

Hearings in this matter were held on June 19-21, 1985, at Reno, Nevada, and June 25, 1985, at Minden, Nevada.

BACKGROUND

In August of 1881, Mr. T. K. Stewart and Mr. G. W. Conkling, U.S. deputy surveyors under contract with the United States, surveyed Township 11 North, Range 21 East, Mount Diablo Meridian, Nevada. Their field notes detailed the ties and monumentations of the lines and corners of the township's sections, including the presently disputed boundaries of Section 4. In April of 1913, Mr. H. W. Reppert, a U.S. transit man under contract with the United States, performed a retracement of several subdivisional lines of the township outlining Sections 10, 11, 12, 13, 14 and 15. According to Reppert's notes, he encountered many "spurious" corners in the area. These corners are close to, but are not adjacent to Section 4. In April of 1973, Mr. Neil Forsythe, a cadastral surveyor with BLM, resurveyed Township 12 North. Forsythe's conclusions are cited by BLM as evidence of their north boundary of Township 11. In 1980, Mr. Jimmy Jones, a registered land surveyor, surveyed Section 4 for the Veta Grande Companies. His survey supports BLM concerning the position of Section 4. Finally, in 1982 Mr. Robert Pratt, cadastral surveyor for BLM, performed a dependent

resurvey of Township 11. His findings are disputed by appellants.

Appellant Downer, a land surveyor and civil engineer for over 50 years, has performed several surveys of the Township 11 area. His most recent survey is dated March 23, 1983, and forms the basis of appellants' grievance. Appellants contend that their survey, not BLM's, is an accurate representation of the original 1881 survey. Specifically, appellants contend they have located the north line of Township 11 North, Range 21 East, Mount Diablo Meridian, Nevada, and have correctly determined the boundaries of Section 4. Pursuant to 32 CFR 4.450-4.4502, appellants protested BLM's dependent resurvey. BLM dismissed the protest. Appellants appealed to IBLA, which referred the matter here.

A dependent resurvey is a retracement and re-establishment of the lines of the original survey in their true original positions according to the best available evidence of the positions of the original corners. United States Department of the Interior, Manual of Instructions for the Survey of the Public Lands of the United States, 1973. If the original corners cannot be found through monumentation or points of control, the lost corners are restored by proportionate measurements, which is measuring to two or more interdependent corners in accordance

with the original survey. Elmer A. Swan, 77 IBLA 99 (1983). Since the issues to be resolved are primarily factual in nature discussion of BLM's survey, appellants' survey, and the original 1881 survey will constitute the primary analysis. Each disputed corner and quarter corner of Section 4 will be examined by comparing the monumentation and calls of the original 1881 survey to those of the parties.

EVIDENCE PRESENTED

South Line of Section 4 (or North Line of Section 9)

In his 1881 field notes, Conkling commenced an easterly random line from the southwest corner of Section 4 to the southeast corner of Section 4. He listed several calls and monuments along this line, including the distance between the two corners. The southwest corner is in contention, and the southeast is not. Accordingly, the calls will be recited westerly from the accepted southeast corner.

Conkling's first call westerly from the southeast corner of Section 4 is a quartz ledge, 2.72 chains in distance. Downer's distance is 2.7 chains. BLM did not testify to this call, but the proximity to the accepted corner renders it insignificant. At 19.72 chains west from the southeast corner of Section 4, "a tunnel bears south, one chain." Downer contends the tunnel is 1.39 chains south of this line; BLM claims Downer's distance is

1.8 chains. BLM contends their south line of 4 is slightly north of the tunnel, or directly on it. Downer claims BLM's line is actually 1.5 chains north of the tunnel. Forsythe offered no explanation for BLM's discrepancy, other than mentioning many old surveys were inaccurate as to distance.

The next westerly point on the south line from the southeast corner of 4 is the quarter corner of Section 4. In his 1881 field notes, Conkling wrote "set post * * * in earth mound * * * and dug pit for 1/4 sec. cor. * * * Pine, 10" dia., N 80° w, 70 links distant." In his appeal letter dated August 28, 1984, Downer noted he found this stump (which BLM said is 9 1/2 inches in diameter). It is the only stump within 100 feet or more of this point. Mr.Walter Neitz, a licensed land surveyor, testified that surveyors usually mark two trees at a quarter corner, and four trees at a section corner. The fact that only one tree was noted in the 1881 field notes and the fact that only one tree stump was present within 100 feet of Downer's stump suggest the point's validity. Downer did not find the wood post, and suggested the earth mound had been washed away over the years. BLM used Jones' survey to establish their point. Neitz, who did the actual survey under Jones' supervision, could not find any monumentation where he felt the correct point was. He used a 1939

State of Nevada highway map to estimate the point. He then dug down about 18 inches and found what he believed was the remnants of a rock pile. He then reconstructed it by assembling the rocks he found into a pile. However, Neitz testified these rocks were not a part of the original 1881 monumentation, since the notes called for an earth mound. Instead, the rocks were placed there to "remonument" the point. Neitz guessed that might have been 50-60 years ago. He also found a badly decayed nine-inch tree stump near the point.

A problem with BLM's south quarter corner of Section 4 is that it creates a 5° deflection in BLM's south line. Downer contends this is a very obvious surveying error which no surveyor wold create. Neitz himself testified a reasonable surveyor would be put on notice by this deflection.

Aside from monumentation description, another clue as to the location of this quarter corner is the tie to Carter's Station, whose remnants are still visible, given in the field notes as "S. 12 1/ 2° E. 16 chains distant." The given point on the south line going towards Carter Station is three chains to the west of the quarter corner. Three chains west of Downer's quarter corner on his south line of Section 4 towards Carter Station turn at an angle of 12°, and is 15.5 chains in length. This is

to the foundation of the Carter Station barn. Perhaps because they picked a slightly different point in Carter Station to measure to, derived from maps and a "[h]ighway field book," BLM contends Downer's angle is not 12° but 19°, and is 16.98 chains instead of 15.5 chains from the station. From BLM's point three chains west of the Jones quarter corner, BLM contends a 14° angle is formed to Carter Station measuring 12.73 chains.

Although the Downer tie to Carter Station appears to be the closest to the record both in angle and distance, I observed this point facing Carter Station, which was blocked from view by a hill between the two points. BLM contends that in order for Conkling to have turned an angle to Carter Station, the station must necessarily have been in his line of sight. They contend that the 1881 surveyors either turned to the station when it became visible, or that they marked the south quarter corner of Section 4, backed up (they were proceeding west to east) until they could see Carter Station, then angled and measured. On the other hand, Downer contends Conkling might have started at Carter Station and worked his way up to the line, and calculated the angle by starting from Carter Station.

Proceeding westerly, the 1881 field notes next mention "Cross Stage Road to Bodie, bears NE and SW

* * *" at 28.5 chains from the southwest corner of Section 4. While this description seems simple enough, the location of Bodie Road is in contention by Downer and BLM. The road was used for horse travel in the 1800's and has long since been abandoned. From where Downer contends is Bodie Road, his south line of Section 4 matches the 1881 field notes by 10 feet. As evidence of the road's location, Downer referred to a 1923 State of Nevada Plan and Profile Highway Map which he claimed outlined Bodie Road, but which labelled it the "travelled way."

He testified:

> We found huge drayhorses' shoes (horseshoes from work horses) * * *. And it was very obvious, the opening through the trees, although it had been many, many years. There was still an opening through there and to go to the other route, there would have trees [sic]. They would have had to dodge around trees. So that was the obvious road. Before the fire, it was quite apparent that it went down through this gulley here (indicating) and up here (indicating). So we were satisfied with that and it was very close to proper distance on call.

From where BLM contends is Bodie Road, their south line of Section 4 matches the 1881 field notes by three feet. BLM introduced a 1893 reconnaissance map, a 1938 aerial photo of Sections 4 and 9, and a

1974 orthophotoquad map to support where they clai
Bodie Road is located. Mr. Eugene Faust, a
cartographer for the State of Nevada, testified a
particular bend in a road visible in the maps
demonstrates the direction of Bodie Road, and claime
the road's intersection with the west and south lin
of Section 4 can be ascertained from the maps. Downe
discredited the maps' accuracy and claimed the smal
scale of the maps rendered them unreliable. He als
claimed BLM's Bodie Road is actually a detour roa
built for the construction of Highway 395, and claime
the 1923 State of Nevada Plan and Profile Highwa
Map, plus a 1923 State of Nevada Detour Sketch
outlined the detour intersecting the south and wes
border of Section 4. BLM questioned why the detou
would be apparent in a 1938 map when the highway wa
built in 1940. Downer claimed detours for Highwa
395 were built years before the highway. He personall
worked on a stretch of this highway just south o
Carter Station, where a detour was also built
Furthermore, the detour was in the 1923 highwa
plans, further suggesting its construction befor
the highway. By letter dated March 23, 1983, appellan
Jacobsen noted that as a child he personally travele
the original Bodie Road, and that it is "not th
graveled detour road which lies to the west of th
existing state highway."

The next point given in the field notes is "cross Bodie Telegraph line, bears NW and SE," at 27.5 chains from the southwest corner of Section 4. The telegraph line was destroyed many years ago, but northwest where Downer's line lies, he found two wooden telegraph wire insulators in trees. One was 100 feet from his line; the other 300 feet from his line. Downer claims the telegraph would have crossed his line at or near the given distance in the field notes. BLM offered no evidence contradicting or discrediting Downer's claim.

At 24 chains east of the southwest corner of Section 4, or 55.72 chains west of the mutually accepted southeast corner of Section 4, the notes read "[c]ross gulch, 20 links wide, course NW." Downer meets this call within five feet, BLM meets it within 20 feet. Both parties' measurements are close to the record because the creek makes a southeast bend from Downer's south line of Section 4 to BLM's south line of Section 4. In Downer's August 28, 1984 appeal letter, he noted strong tree line cuts on his line near the creek have been recently destroyed by fire.

Finally, the southwest corner of Section 4 is described in the 1881 field notes:

> Set trachyte stone 24x18x12, in stonemound 4 1/2 feet in diameter at base, by 2 feet

> in height * * * from which bears a Pine 12 (inches in diameter) N. 80 ° W. 19 (links distant). Pine 16 (inches diameter) S. 79° W. 23 (links distant), Pine 10 (inches diameter) S. 54° E. 31 (links distant, and) Pine 8 (inches diameter) S. 62° E. 28 (links distant).

Downer located no stone, mound, or trees in the area that fit with his line. He restored what he believed was an obliterated corner by the double proportionate method whereby an original corner north, south, east and west is tied to the corner by measuring their original distances. One of the proportionate corners he used was his own south quarter corner of Section 4. BLM produced very strong physical evidence of what they contend is the true corner. Four uprooted blazed bearing trees were found. Two blazes were age-dated to 1881, the year of the original survey. A trachyte stone measuring 22x17x9 was found with markings, along with a wood post and rebar set there by Jones. Forsythe testified the trees were near stump holes. Downer testified the markings in the stone looked fresh to him, and suggested the trees had been moved to the area because they were not lying in their natural position. While the former observation might have merit, it is unpersuasive to suggest someone physically moved these trees. Forsythe testified the trees were lying naturally,

one 30 feet away from another, and suggested the wind blew them to their positions. Worth noting, however, is the fact that all the trees are considerably (up to 50%) smaller in diameter than the trees in the 1881 field notes. They also do not match the field notes in distance, and are particularly off from the field notes in angles. Furthermore, Downer claims there are larger trees within 10 feet of BLM's corner that should have been blazed.

While these discrepancies are disturbing, they do not in and of themselves disprove BLM's physical evidence of the corner. As IBLA noted, "discrepancies between bearings and distances in old and more recent surveys are not uncommon and are not sufficient alone to disprove the re-establishment of a corner." Accordingly, appellants must present clear and convincing evidence disproving BLM's corner. A look at other evidence besides the field notes concerning the south line's location will assist in determining whether appellants have met their burden of proof.

Downer's extrinsic evidence included the "Carter Homestead," originally purchased by Mr. William Carter and later purchased by appellant Jacobsen. After this area was surveyed and the official map signed on October 27, 1881 by the Surveyor's General Office,Carter took advantage of the Homestead Act of 1862 and applied, in December 1881, for 160 acres,

the E-1/2 NW-1/4 and W-1/2 NE-1/4 of Section 9. This borders the line of contention, the south line of Section 4. Carter's Homestead papers were signed by President Chester A. Arthur on June 1, 1882. Jacobsen recorded his deed in September, 1915, which said "160 acres according to the official plat of the survey of the public lands, as made by the United States Surveyor General * * *" and which was signed by Governor J. W. Adams. Appellant Jacobsen and previous owners have been paying taxes on this land, and have been using the full 160 acres for over 100 years. The 1882 patent issuance of 160 acres remains as such with Downer's south line, but is reduced by 22 acres if BLM's south line is used. Downer claims that a blazed juniper tree, which was age dated to 1881, was used as the "entryman's corner" for the Carter Homestead. This tree lies on Downer's line and is very close but not on the northwest corner of the Carter Homestead. It is not mentioned in the 1881 field notes.

BLM's extrinsic evidence included a 1939 Nevada State Highway Department map, a land deed purchased by the Nevada State Highway on November 8, 1940, and Jones' survey of 1980. The map, deed, and survey each delineate the south line in accordance with BLM. However, no testimony was proffered explaining the methodologies of the Nevada State Highway's

arrival at their boundary, nor, other than the aforementioned reasons for their own survey, why Jones' survey is truer to the 1881 field notes. The conclusions that can be derived from such evidence is therefore limited.

West Line of Section 4

In his 1881 field notes, Conkling commenced a northerly random line between Sections 4 and 5. At 38 chains from the southwest corner of Section 4, or 2 chains south of the west quarter corner of Section 4, he "crossed gulch, 25 links wide, course NW." BLM contends Downer is off from the notes two-thirds of a chain, and that they are off by one-third of a chain. Downer contends he is off by one-half of a chain, and suggested that the creek could have shifted over the years.

The next northerly point in the field notes is the west quarter corner. At 40.35 chains from the southwest corner of Section 4, Conkling "set trachyte stone 42x22x20 in stone mound, (four feet) in diameter at base, by (two feet) in height." Downer found a large trachyte stone, measuring 42x24x22. The stone, Downer claims, has a badly weathered but definite "1/4" chiseled on its face. To support his contention, Downer introduced two witnesses who viewed the rock, Mr. Dave Duryee and Dr.Robert E. Jones. Jones, a consulting geologist, testified as to the alleged

chisel marks, and by letter dated August 21, 1984, stated:

> The slash between the 1 and the 4 has been chiseled along an existing natural crack in the rock, a site where any prudent man would pick as a point of weakness. Both the 1, above, and the 4, below the slash have been cut to at least 1/4 [inch] in places.

BLM contends there are no marks on the Downer's stone, and that the marks Downer claims are from a chisel are in fact from a crack in the rock. Instead, BLM's quarter corner is evidenced by a granite stone, 14x6x4, with an obvious "1/4" chiseled on its face. A mount of stone surrounds it. Downer contends the "1/4" appears freshly made, notes the stone is not a trachyte one, and that the stone is six inches high. Counsel for both parties had me observe their respective quarter corner stones in the field. My untrained eyes failed to detect what I could consider to be man-made markings on the Downer stone.

Although Downer is of the opinion that the marks on BLM's markings look "fresh," the practice of scribing such stones terminated in 1910. Without further evidence of who made or how the alleged new marks were made, Downer's opinion is not convincing. More disturbing about BLM's rock is the fact that the stone is not a trachyte stone, as noted in the

field notes. Furthermore, BLM's stone is much smaller than the notes 42x22x20, enough so to be easily carried from one place to another. BLM attempted to show that "setting" a rock may mean lifting it and placing it in a desired position, thereby increasing the dimensions of their stone by a few inches since its measurements were originally taken at surface level. However, Downer contends it was common practice to use the word "set" to mark a rock, not necessarily move one. Furthermore, to move a 42x24x22 rock, which could easily weigh thousands of pounds, is not a reasonable proposition, unless the field notes contain incorrect measurements. However, it seems unlikely the field notes are describing a six-inch high stone.

Forsythe testified that a surveyor could definitely not use a boulder as a monument unless it fell directly on line. Downer testified a surveyor might deviate off the line to mark a stone, but only by a few feet. This strict adherence to position could imply one of two things. The probability that Downer's particular boulder fell directly on line is small. Since it is too large to move, the probability of this particular stone being directly on Downer's line is even smaller. Conversely, Downer testified his large boulder is the only one of its kind in Sections 4 and 5. BLM disputes this. If the rock is

indeed of the dimensions given in the field notes, and there are no other rocks of its ind in the area, Downer's rock has to be the true monument. As a final note, BLM's rock has discrepancies from the field notes which are ascertainable, namely the type and size of the rock. These characteristics are empirically provable. Downer's rock has an alleged discrepancy which is not easily provable one way or another, namely whether or not a "1/4" has been chiseled on its face.

Proceeding northerly, the 1881 field notes note "cross road to Bodie, bears NW and SE" at 3.5 chains from the quarter corner. Again, Bodie Road's location was disputed. From Downer's point, his quarter corner is 3.3 chains from Bodie Road, while BLM's is 6.5 chains. From BLM's point, their quarter corner is 3.2 chains from Bodie Road, while Downer's is 2.11 chains.

Finally, the 1881 field notes describe the northwest corner of Section 4"set trachyte stone 20x10x8 in stone mound * * * from which bears a [p]ine 12 (inches diameter) S. 28° N. 25 (links distant), [p]ine 6 (inches diameter) S. 57 3/4 ° E. 20 (links distant)." Downer found no stone or trees where he felt the correct point should be so he double proportioned the corner, using the 2 northwest corner of Section 33, the northeast corner of Section

4, the southwest corner of Section 9, and the disputed corner of Section 5. Downer claims the distances from his point match the above corners, Bodie Road, and the creek "perfectly." Also, the call to the mutually accepted southwest corner of Section 8 matches Downer's point. Again, both trees dated to 1881, but again, both trees did not match the field notes in distances, bearings and diameters. One tree is particularly off from the notes (the notes say 6 inch pine, 557 3/4 E. 20 links distant, BLM's is a 12 inch pine 574.5 E., 45 links distant). Downer also found "old line cuts" on his west line of Section 4, although none are mentioned in the notes.

Double Corners

Downer does not contend no corners exist where BLM claims they do. On the contrary, he fully acknowledges the existence of several of the corners. He further believes they were set there in 1881, the year of the original survey. To support his theory, he introduced Reppert's retracement of nearby sections in Township 11. Reppert found many "spurious" corners in his survey, and concluded the corners had either been moved or double corners initially set. Reppert's retracement initiated from an Indian who claimed land was being fraudulently taken from him by an incorrect survey. Downer also introduced evidence

of a double corner in the northwest corner of Section 5, and claimed they were also evident in the south quarter corner of Section 4, the west quarter corner of Section 4, and the north quarter corner of Section 4. As to any possible rationale for the existence of two sets of corners, Downer suggested either someone might have wanted to gain land in an unscrupulous manner, or that the initial survey was done incorrectly, then incorrectly "corrected."

This latter theory was elaborated by Downer's protest letter dated March 23, 1983:

> To explain how this (the double corners) could have happened, we should look at the township line between T. 11 N. R. 21 E. and T. 12 N. 21 E. It is apparent that Stewart and Conkling, the Deputy Surveyors who contracted with the Surveyor General's office in Virginia City, to survey these townships in June of 1881, ran the random line for this township from east to west, setting a temporary corner every half mile. They arrived at a point 210 links south of the western township corner set in 1861. An error of 210 links in 6 miles is 0°15'. So they ran S 89°45' E. on the true corners every half mile. Presumably then the true line lay north of the random line.
>
> There are two rows of rock mounds along the township line about 200 feet apart north to south.

Later, in the same year, the subdivisional

section lines were surveyed in T. 11 N. R. 21 E., starting at the south and checking into the true (northerly) township line on the north.

The 1881 "Instructions to Deputy Surveyors" Section 99, Paragraph 5, specifies "* * * where the lines of a township do not extend 6 miles the excess or deficiency shall be specifically noted and added to or deducted from the western and northern ranges of section or half sections in such township.

The notes show that the line between Sections 4 and 5, T. 11 N. R. 21 E., was closed into the township line and that there was 0.34 chains in excess. When the line between Sections 32 and 33, T. 12 N., R. 21 E., was surveyed, they record 80 chains from he true township line to the NW corner Section 33.

The distance from the northerly of the two rock mounds on the township line to the NW Corner Section 33 checks within 1/3 chain of record 80 chains. The distance from the southerly of the two rock mounds is 82.7 chains, 2.7 chains more than record. Obviously, the northern rock mound is on the true line.

One mile west along the township line a similar situation exists. There are two rock mounds about 230 feet apart north to south. The northerly mound is 3 chains south of the old road, exactly as called for in the notes for the section line between Sections 31 and 32 T. 12 N. The southerly mound is 6 chains south of the old road, 3 chains more than record. Obviously, again the northerly mound is

on the true line. The northerly rock mound also matches a call to a road 29 chains north and to a ravine 31 chains south, as well as the record distance to the SW Cor. Sec. 8.

However, when running south from the true northerly township line, we find that the corners do not match record and are 3 chains too far south. But, if measured from the rock mound on the random township line, the distance matches record distance, but the calls do not fit. The distance to the SW Cor. Sec. 8 is 2.6 chains short.

The answer is apparent. After the township line and section lines were all surveyed, notes and platted, the corners of Sections 4 and 5 appeared to have been moved south 3 or 4 chains.

This is obvious because the north-south dimensions of Sections 8 and 9 have been reduced by similar amounts, 3 chains more or less, while Section 33 was increased by 3 chains more or less.

Fortunately, the calls to the tunnel and Carters as well as calls to the creek, telegraph line and Bodie Trail Road record the true location on the ground of the north line of Section 9 and the Carter homestead. The excellent line cuts and double blazed line trees as well as the N-1/4 corner of Sec. 9 as relocated from what we believe to e the stump of the 1881 bearing tree serve to record the official survey line.

Appellants introduced evidence showing that

the majority of BLM's corners were consistently off in distance from the disputed corners by an average of 230-240 feet, and always in the same direction. The same holds true with the corners' distances to other record calls. Appellants' corners were shown to be off in distance from undisputed corners by less than one-fourth the average of BLM, and were random in direction. The same also holds true with the corners' distances to other record calls.

FINDINGS AND CONCLUSION

Normally monumentation provides the strongest evidence as to the true location of a corner. BLM's age-dated trees are without doubt the strongest evidence presented as to the original location of the southwest corner of Section 4. However, appellants' monuments have merit, although none are as convincing as the age-dated trees. Appellants' pine stump in the south quarter corner of Section 4 is close to the record in dimensions, and is the sole stump within a 100 foot radius. It appears more convincing than BLM's reconstruction of a purported monument. Appellants' 42x24x22 stone at the west quarter corner of Section 4 is nearly identical in dimensions to the record. Although the existence of a chiseled "1/4" remains uncertain, the composition and size of BLM's rock does not.

The most disturbing feature of BLM's re-survey,

however, is the complete non-conformity to the record calls. Most of BLM's calls are off by approximately three chains, and always in the same direction. Appellants' distance to Carter Station is closer to the record distance. The telegraph insulators found by appellants were not contradicted by BLM. The record tunnel distance is substantially closer to appellants' line. The five degree bend in BLM's south line of Section 4 was described by BLM's own witness as being unreasonable. Finally, BLM's small scale maps purporting to show the location of Bodie Road are not as convincing as appellants' detour map, highway map (which depicted Bodie Road as the travelled way), and testimony.

To accept appellants' line as a correct retracement of the original survey is dependent on whether double corners exist. The evidence presented cannot support such a finding. On the other hand there appears to be so many deviations from the original calls and distances in BLM's re-survey as to cast doubt on its accuracy. Accordingly, I see no alternative but to remand the case to the BLM for a resurvey, a solution suggested by the Board's remand decision.[1]

/s/ L. K. Luoma

Administrative Law Judge

APPEAL INFORMATION

An appeal from this decision may be taken to the Board of Land Appeals, Office of the Secretary, in accordance with the regulations in 43 CFR Part 4 (revised as of October, 1978). Special rules applicable to public land hearings and appeals are contained in Subpart E. The name and address of the adverse party to be served with a copy of the notice of appeal and other documents appears below. The appeal must be filed with the Office of Hearings and Appeals, 4015 Wilson Blvd., Room 1123, Arlington, Virginia 22203 (due to closure of the Sacramento office).

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1 As the parties are aware I was unfortunately placed under severe time constraints in the preparation of this decision because of the untimely closure of the Sacramento hearings office and termination of my position. The record is very voluminous, much of it of a very complex nature. I acknowledge that the time available did not permit me to examine and analyze the evidence in such detail as I would have liked. Nevertheless I hope that in the event of appeal the record made is complete and that it will suffice to permit IBLA to render a just and correct final decision.

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